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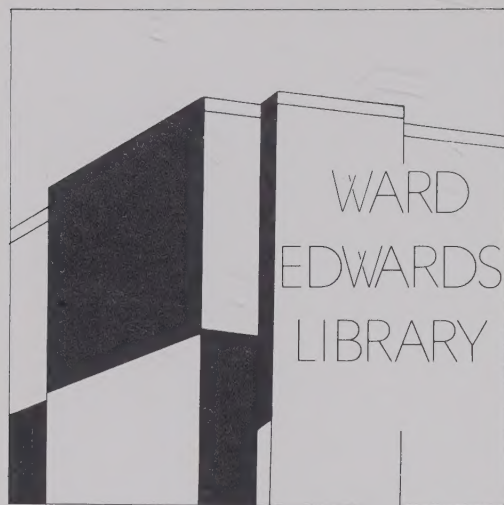
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Land Use & Environment Law Review 1979






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Land Use & Environment Law Review—1979

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PREFACE

The publication of *Land Use & Environment Law Review-1979* marks two anniversaries worthy of note. First, it is now ten years since the National Environmental Policy Act of 1969, sometimes referred to as our nation's environmental "Magna Carta," was enacted into law. Second, and not unrelated to the first, is the fact that *Land Use & Environment Law Review-1979* is the tenth annual volume in this series. It is sincerely hoped that our readers, especially those who have been with us since the series began in 1970, take pride in and find great use for their collection of the assembled series, which with each passing year increasingly constitutes an unparalleled reference source in the field of environmental and land use law.

With ten or more years of experience behind it, the environmental movement—and the environmental law which it spawned—has long since ceased to be regarded as a passing "fad." In fact, environmental concerns, especially as they are energy related, have moved into the center of the national limelight today in a way and with a force which none but the most prescient could have predicted only a decade ago. With the reality of energy shortages staring us in the face and with ever-mounting cumulative evidence of adverse environment-related consequences for health and quality of life, it is no longer realistic nor politically feasible for those who wield power in our society to dismiss those who espouse environmentalist positions as quacks or obstructionists. Indeed, it would not be too much of an exaggeration to state that events of the recent past have made environmentalists of us all. A consensus, ranging across the political spectrum, seems to have developed that planning, at least in the areas of energy and land use, is an idea whose time has come. Debate now focuses upon what form such planning should take, not upon whether planning should take place at all. It is hoped that the articles assembled here, which both document the frustrations of efforts already undertaken and suggest areas for new initiatives, will contribute constructively to this debate.

Land Use & Environment Law Review-1979 contains material published in 1978 after *Land Use & Environment Law Review-1978* went to press, and material published in 1979 up until press time. Future editions, on an annual basis, will include

materials selected from the total literature, which appear during successive twelve-month periods following publication of this volume.

An introductory survey, reviewing the year's developments and summarizing the volume's contents, precedes the articles reprinted in this collection. Aiding in the use of this volume as a reference research tool is a Subject and Author Index at the back of the volume. For the added convenience of the reader, a cross-reference table of original law review citations and corresponding page numbers in this volume is appended at the end of the text.

The editor and publishers wish to express their gratitude to the authors who contributed to this volume and to the various copyright holders for graciously extending permission to reprint the articles contained herein.

F.A.S.

September 1, 1979

Note: Original page numbers of law review material reprinted in this collection are indicated in brackets on each text page.

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INTRODUCTORY SURVEY—1979

FREDRIC A. STROM

The contents of this year's *Land Use & Environment Law Review* are arranged into seven parts, as follow:

- Part 1: The Environmental Movement: A Veteran's View
- Part 2: The First Decade: The Environmental Impact Statement Reconsidered
- Part 3: Environmental Litigation
- Part 4: Energy and the Environment
- Part 5: Pollution Control
- Part 6: Land Use Control
- Part 7: Fiscal Analysis: A New Land Use Tool

As with last year's *Land Use & Environment Law Review* the reader is warned to bear in mind that these categorizations by topic are, of necessity, somewhat arbitrary and illusory, inasmuch as many of the subjects interrelate with one another and, in many instances, a given article might as well have appeared under one subject heading as under another. For example, issues of energy use can scarcely be considered apart from their pollution control aspects. Or, more specifically, Murray's and Seneker's article on industrial siting, placed in Part 5, under "Pollution Control," might just as well have been placed in Part 6, under "Land Use Control." For these reasons, therefore, the reader interested in a specific subject is well advised to consult the Author and Subject Index, appearing at the end of the volume, to be sure that all relevant materials are consulted.

1. The Environmental Movement: A Veteran's View

Chosen as the lead article for this year's *Land Use & Environment Law Review* is David Sive's "Environmental Decision-making: Judicial and Political Review."¹ Mr. Sive is a longtime

¹ 28 CASE W. RESERVE L. REV. 827 (1978), *infra* at 3.

veteran of the environmental movement, having served as counsel for environmentalist interests in litigated cases since at least the mid-1960's. His article, viewed on one level, is interesting simply for its good-humored, freewheeling "insider's" insights gained into the workings of the judicial and political processes over the years. More specifically and more seriously, however, the article serves as a sequel to his earlier article, "Some Thoughts of an Environmental Lawyer in the Wilderness of Administrative Law,"² which appeared in an earlier volume of this series.³

In that earlier article, Mr. Sive posed the question whether judicial review of administrative decisions in the area of environmental law is, or ought to be, more stringent than judicial review of administrative decisions generally. The earlier article answered that question generally in the affirmative, citing in support therefor the importance of environmental values, the uniquely irreversible nature of most environmental decisions, the (then) newness of the legal issues involved, and, finally, the (then) predictably pro-developmental, anti-environmental bias of most of the administrative agencies involved.

In the present article,⁴ written eight years later, Mr. Sive reassesses his earlier position and finds that, at least from an environmentalist point of view, the arguments supporting stricter judicial review of environmental administrative decisions over other administrative decisions are less compelling. First, environmental law is no longer novel; many of the earlier unresolved questions of law and legal definition have been resolved, so that cases arising today more often turn on questions of fact than on questions of law. Second, Mr. Sive finds that many administrative agencies, especially the federal Environmental Protection Agency, have acquired their own environmental expertise and no longer exhibit the same degree of pro-development bias needful of antidotal judicial supervision as in the past. Third, and related to the above, is the fact that today, "developmental" interests are just as likely to seek review of "pro-environment" decisions as are environmentalists to seek review of "pro-development" decisions. (It's all a question of whose ox is being gored!) Nevertheless, Sive counsels that, on the balance, the unique complexity of most environ-

² 70 COLUM. L. REV. 612 (1970).

³ 2 ENVIRONMENT L. REV. 87 (1971).

⁴ Sive, *infra* at 3.

mental decisions and their frequently irreversible nature continue to warrant a somewhat higher degree of judicial activism in the public interest than other areas of administrative law.

Setting the above in context, Sive reminds us, in the concluding pages of his article, that it is ultimately in our political forums, influenced by citizen activism,⁵ rather than in our judicial forums, that the nation's ultimate environmental destiny will be determined.

2. The First Decade: The Environmental Impact Statement Reconsidered

As alluded to in the preface to this volume, 1979 marks the tenth anniversary of the National Environmental Policy Act of 1969 (NEPA).⁶ Aside from constituting a national declaration of the importance of environmental values⁷ and establishing the advisory Council on Environmental Quality within the executive branch,⁸ undoubtedly the Act's most important contribution, and that which has attracted the most attention and generated the most litigation, is the statute's requirement, set forth in Title I, Section 102(2)(c) thereof, requiring preparation of an Environmental Impact Statement (EIS) for all "Federal actions significantly affecting the quality of the human environment."⁹

⁵ *Id.*, *infra* at 14-16, offers comparisons of the environmental movement to other contemporary civil rights movements, finding similarities in their highly moralistic tones and motivations. In contrast to other civil rights movements, however, Sive doubts the utility of such techniques as civil disobedience in achieving environmental reform. Recent "sit-ins" at nuclear power plants following the mishap at Three Mile Island nuclear power plant, and the media attention given thereto, would seem to cast doubt on this observation, however. See, e.g., article, N.Y. Times, 8/6/79, p. B1, *Troopers Arrest 102 in a Protest at Indian Point—4,000 at Con Edison Plant Oppose Nuclear Power*. Two days later, New York State's Energy Office released to the press a 1,000 page, fifteen-year "energy master plan" opposing construction of any new nuclear power plants in the state, with the state's Energy Commissioner, James L. Larocca, commenting that "Nuclear power is not capable of achieving public acceptance." See article, N.Y. Times, 8/8/79, p. A1, *Increase Proposed in Coal and Gas Use in New York State—Less Oil Dependence Is Goal—But 15-Year Master Plan Rejects Building New Nuclear Plants Beyond Two in Progress*.

⁶ National Environmental Policy Act of 1969, Pub. L. 91-190, 83 Stat. 852 *et seq.*, effective Jan. 1, 1970. The statute is codified at 42 U.S.C. §§4321 *et seq.*

⁷ 42 U.S.C. §§4321, 4331.

⁸ 42 U.S.C. §§4341 *et seq.*

⁹ 42 U.S.C. §§4332. The directly relevant language of the statute provides:

"The Congress authorizes and directs that, to the fullest extent possible: . . . all agencies of the Federal Government shall—

" . . .

Although many in Congress who voted for this legislation probably regarded it as a sort of "apple pie and motherhood" bill which would never amount to much substantively, litigation brought by environmentalists, and later by industry and developmental interests as well,¹⁰ proved the Environmental Impact Statement portion of NEPA to be a potent provision indeed.¹¹ Issues litigated have included whether or not an EIS was required for a particular federal "action"; whether "action" referred to discrete projects or applied to whole federal programs, and even legislative action, as well; whether an EIS, where prepared, was "sufficient"; and whether such "sufficiency" was to be measured by the courts in terms of compliance with procedural requisites only or also called for consideration by the courts of the correctness of the substantive

"...

"(C) include in every recommendation or report on proposals for legislation and other major Federal actions significantly affecting the quality of the human environment, a detailed statement by the responsible official on—

- (i) the environmental impact of the proposed action,
- (ii) any adverse environmental effects which cannot be avoided should the proposal be implemented,
- (iii) alternatives to the proposed action,
- (iv) the relationship between local short-term uses of man's environment and the maintenance and enhancement of long-term productivity, and
- (v) any irreversible and irretrievable commitments of resources which would be involved in the proposed action should it be implemented.

Prior to making any detailed statement, the responsible Federal official shall consult with and obtain the comments of any Federal agency which has jurisdiction by law or special expertise with respect to any environmental impact involved. Copies of such statement and the comments and views of the appropriate Federal, State, and local agencies, which are authorized to develop and enforce environmental standards, shall be made available to the President, the Council on Environmental Quality and to the public as provided by section 552 of Title 5, and shall accompany the proposal through the existing agency review processes. . . ."

Additionally, subsection (E) of Section 4332 directs federal agencies to "study, develop, and describe appropriate alternatives to recommended courses of action in any proposal which involves unresolved conflicts concerning alternative uses of available resources."

¹⁰ See, e.g., article, *Turning the Tables—Businesses Are Finding Environmental Laws Can Be Useful to Them—Social and Economic Impact is Cited in Court Suits That Block, Delay Rules—Defense for Sludge Dumpers*, in *The Wall Street Journal*, 6/9/78, p. 1.

¹¹ It has been observed, no doubt accurately, that the reason the Environmental Impact Statement portion of NEPA has assumed such ascendant importance among the Act's many provisions is that it is the only portion of the statute to speak in terms other than declarations of principle and vague generalities and to therefore set forth objective, justifiable standards. See Koshland, *infra* at 67. Even so, judicial review of Environmental Impact Statements has generally been limited to issues of procedural, rather than substantive, compliance. See note 12, *infra*.

result reached.¹² In terms of the litigating parties' interests, the delay brought on by issuance of court injunctions, pending resolution of the legal issues, was often as important a goal or factor as the final resolution of the issues themselves, leading to the oft-voiced charge that the statute had lent itself to abuse.¹³

In recognition of NEPA's tenth anniversary, this year's edition of *Land Use & Environment Law Review* contains five articles, assembled in Part 2, which are addressed generally to the issue of how well the Environmental Impact Statement process has functioned in terms of improving the quality of decision-making affecting the environment. Although hardly a voice is anywhere to be heard suggesting that we, as a nation, return to our pre-1969 ways, there is certainly a consensus, reflected in these articles and elsewhere, that the ways in which environmental impact assessments are made—and then acted upon—can be improved.

Cynical observers may be tempted to suggest that the main result of introduction of the EIS process has been a profitable expansion of employment opportunities for environmental consulting firms, lawyers, and producers of paper, but not much else; that, despite the tremendous amounts of time, expense and effort put into preparation of Environmental Impact Statements, the resultant product is usually a rambling, pro forma rubber stamp used to provide justification to proceed with a course of action already determined upon in advance. Some objective support for this cynical view may be found in the article by William W. Hill and Leonard Ortolano, "NEPA's Effect on the Consideration of Alternatives: A Crucial Test."¹⁴

In 1974, Hill and Ortolano conducted a questionnaire survey among personnel of the small watershed program of the U.S. Department of Agriculture's Soil Conservation Service and of the preauthorization studies branch of the U.S. Army Corps of Engineers to investigate the actual operative effect of the environmental impact assessment process upon agency decisionmaking. Their thesis was that if the EIS process were

¹² See Koshland, *infra* at 66; see also article, "Implementation of the Environmental Impact Statement," *infra* at 115 *et seq.*

¹³ See generally Taylor, *infra* at 97, broadly criticizing the role of judicial review as relates to EIS's on grounds, *inter alia*, of the inordinate delays frequently engendered thereby.

¹⁴ 18 NAT. RESOURCES J. 285 (1978), *infra* at 21.

functioning as intended, it should be inducing the agencies to seriously consider a broad range of alternatives in their planning of particular projects, including the alternatives of not proceeding with a project at all or of recommending alternative solutions within the jurisdiction of other agencies or levels of government entirely.

The results of the survey, set forth in their article below,¹⁵ show that although agency personnel indicated enthusiasm for the EIS concept and stated that, in general, all alternatives were regularly given serious consideration, when questioning focused on specific projects, the frequency with which substantial modification or abandonment of a project was considered as a result of disclosures revealed through the EIS process was disappointingly low. Thus, of approximately 140 projects studied, in fewer than half did the EIS process suggest the possibility of any change in a project, and of the changes suggested, the great majority involved minor structural refinement or wildlife mitigation measures; in only six cases was it indicated that the alternative of "no project" received any consideration.¹⁶ Further questioning as to whether cost and feasibility studies were initiated on the alternatives suggested by the EIS process, moreover, cast doubt on whether the identified alternatives were ever really seriously considered.

In conclusion, Hill and Ortolano suggest that although the EIS process does sometimes produce project modifications and adoption of mitigation measures—what they call "cosmetic" changes—it rarely results in the kind of thorough-going assessment of the desirability of a project or of alternatives thereto as envisioned by NEPA. This, they attribute at various points to the mission-oriented sense of the agencies (reinforced by federal budget practices and the dynamics of bureaucratic functioning), to the late stage in agency planning at which preparation of an EIS is usually undertaken, and to underutilization of personnel trained in environmental and interdisciplinary fields. "NEPA . . . was intended to do more than insure that environmental considerations were brought in at the end of planning to minimize adverse environmental impacts of (already planned) projects. Rather, NEPA was intended to force federal agencies to consider environmental factors equally with economic and technical factors in their planning

¹⁵ *Id.*

¹⁶ *Id.*, Table 1, *infra* at 35.

and decision making processes. If NEPA is to accomplish this end it is necessary that environmental considerations be integrated into planning starting at the earliest possible point in the process.”¹⁷

The article, “*Ogunquit Village Corp. v. Davis* and Judicial Relief Under the National Environmental Policy Act: The Completed Project Problem,”¹⁸ addresses itself to the discrete issue of whether NEPA affords any basis for relief to injured or disappointed interested parties when a completed federal or federally-authorized project proves to have unanticipated adverse environmental effects. In particular, does the duty to identify and mitigate adverse environmental effects set forth in the EIS portions of NEPA establish a continuing duty, with concomitant rights enforceable perhaps under a theory of tort or breach of contract, to mitigate the adverse environmental effects of a completed project where the original EIS erroneously failed to identify such adverse effects?

This issue of the completed project problem was faced for the first time in *Ogunquit Village Corp. v. Davis*.¹⁹ Here, the coastal village of Ogunquit, Maine had requested the Soil Conservation Service to restore a large but eroding sand dune that served both as a tourist attraction and as protection from the sea. The village, unwarned by anything stated in the EIS prepared for the project, got not the gently sloping, fine white quartz sand dune that it expected, but, rather, an unsightly, trapezoidal mound of coarse yellow gravel hauled from an inland location. The village immediately sued for relief under NEPA, citing the nondisclosure of this obviously adverse environmental effect in the Service’s EIS prepared for the project.

The First Circuit denied relief, ruling, in this case of first impression, that completion of any project immunizes the project from judicial review of EIS adequacy unless the plaintiff can show “bad faith” in the preparation of the EIS. The instant article argues that imposition of a “bad faith” standard for review of completed projects imposes an impossible burden of proof on plaintiffs and will virtually always guarantee summary disposition for defendants in cases of this sort. The article recognizes and shares the First Circuit’s motivating concern that courts not be burdened with litigation over completed

¹⁷ *Id.*, *infra* at 44-45.

¹⁸ 64 VA. L. REV. 629 (1978), *infra* at 49.

¹⁹ 553 F.2d 243 (1st Cir. 1977).

projects, but argues that application of traditional rules governing granting of injunctive relief on the basis of EIS insufficiency would be a better approach. The traditional rule governing injunctions, *e.g.*, against *partially* completed projects, requires plaintiffs to show (1) serious deficiency in the EIS, (2) promptness in bringing challenge, and (3) a showing that the benefits of injunctive relief outweigh the detriments of interference with the project. The article argues that injecting consideration of the defendant's "bad faith" into the above analysis where review of completed projects is concerned not only fails to serve any purpose of judicial efficiency in terms of discouraging nonmeritorious suits, but substantively undermines the purposes of NEPA by signalling to agencies that their environmentally irresponsible conduct will be practically unsailable once a project is completed.

The question of the timing of challenge to EIS sufficiency is also, indirectly, the subject of James M. Koshland's article, "The Scope of the Program EIS Requirement: The Need for a Coherent Judicial Approach."²⁰ As noted by Hill and Ortolano,²¹ a seeming major deficiency of the environmental impact assessment process is that EIS's are usually prepared fairly late in the planning process, at a stage at which agencies have already, as a practical matter, committed themselves to proceeding with a proposed course of action. Thus, improved functioning of the environmental impact assessment process requires that assessment be undertaken at an earlier stage in the planning process than has heretofore generally been the case.²² Obviously, one way of moving the environmental impact assessment process forward in time is to require that EIS's be prepared not only in conjunction with the planning of particular projects, but that they also be prepared in conjunction with the longer-range planning of entire programs. Advantages of requiring EIS's for entire programs, as well as for particular projects, include not only the consideration that earlier environmental assessment has a better chance of actually influencing decisionmaking, by occurring prior to the commitment of resources and budgets, but also the fact that program EIS's can look at the "whole picture" and better consider the cumulative effects of a series of actions whose effects, looked at in isolation,

²⁰ 30 STAN. L. REV. 767 (1978), *infra* at 61.

²¹ "NEPA's Effect on the Consideration of Alternatives: A Crucial Test," *infra* at 21.

²² See quoted matter in text, *supra*, at note 17.

might not seem significant. Additionally, as pointed out by Koshland, where a program consists of a series of similar projects or actions, requiring the preparation of a program EIS can result in economies of scale by avoiding duplicative, repetitious analyses of the same issue for each individual project.²³

Although courts and administrators have generally recognized that programs, as well as individual projects, can merit the preparation of an EIS,²⁴ an underlying theme of Koshland's article is that program EIS's have, in general, been underutilized.²⁵ Balancing this concern for underutilization of program EIS's, is the awareness, shared by Koshland, that where the planning of programs is at an extremely early or tentative stage, preparation of a program EIS may call either for the gathering of such massive information or for such speculative analysis as to make the effort not worthwhile.²⁶ In this context, Koshland demonstrates how court decisions to date have been so inconsistent and incoherent as to afford administrators and litigants little guidance on the subject of when program EIS's are required. The article concludes by offering a suggested analytical approach to the problem.

Koshland's proposed analytical test for imposing the duty to prepare a program EIS proceeds in steps and is sufficiently detailed to preclude accurate summarization here.²⁷ The main

²³ Koshland, *infra* at 70, note 44.

²⁴ The leading cases construing the scope of the program EIS requirement are probably *Scientists' Inst. for Public Information v. AEC*, 481 F.2d 1079 (D.C. Cir. 1973) and *Kleppe v. Sierra Club*, 427 U.S. 390 (1976), both discussed throughout Koshland's article.

²⁵ It seems to this writer that a strong argument, not fully developed by Koshland, can be made that program EIS's, rather than project EIS's, should be bearing the main weight of environmental policy determination in this country. Indeed, program EIS's, as contrasted to project EIS's, are much better adapted to fulfilling the overall goals of NEPA with respect to promoting long-range planning, preserving the environment for future generations, avoiding irreversible commitments of limited resources and so forth. On the other hand, it's easy to see how practical considerations and political structures have dictated that most litigation has focused on project EIS's rather than program EIS's—for example, it is easier to rally a concerned local constituency that will litigate to block the construction of an Interstate highway through a particular neighborhood than it is to rally an amorphous national constituency to challenge, on program EIS grounds, the entire scheme of federal highway funding and development. Such seems to be yet another example of "The Tragedy of the Commons" so frequently encountered in the area of environmental law.

²⁶ Koshland, *infra* at 69, note 39.

²⁷ *Id.*, *infra* at 87-96. It should be noted that Koshland's test for defining a "program" requiring preparation of an EIS allows an agency to rebut this "presumptive" requirement by showing that the relevant information to be contained in the EIS is unavailable or unduly difficult to obtain. *Id.*, *infra* at 93-94.

point of it, which is well taken, is that until a definitional test which both sets forth objective criteria and provides a predictable scale on which to weigh those criteria is judicially (or congressionally) established, the program EIS, although potentially an unparalleled tool for implementing the National Environmental Policy Act, is bound to languish as a victim of its presently amorphous, undefined and, therefore, unenforceable nature.

Randall L. Taylor, in "NEPA Pre-emption Legislation: Decisionmaking Alternative for Crucial Federal Projects,"²⁸ suggests that the delay and dissatisfaction engendered by current, cumbersome EIS procedures can be avoided—at least in instances involving projects of major national import—through utilization of preemption legislation by Congress exempting specific projects from judicial EIS review requirements. Preemption legislation has been thus utilized once already, in circumstances described in Taylor's article, to speed completion of the Trans-Alaska Oil Pipeline,²⁹ and has been similarly attempted as a means of allowing completion of the Tellico Dam despite that project's apparent violation of the Endangered Species Act through the destruction of the habitat of the nearly extinct "snail darter" fish.³⁰ Other legislation, looking forward to the eventual construction of a pipeline to transport natural gas from Alaskan sites to the lower forty-eight states, will preempt the EIS prepared in conjunction therewith from the normal routes of judicial review.³¹

Although it is no doubt true, as argued by Taylor, that the application of normal EIS procedures and judicial review thereof has, in specific instances, operated to the grave detriment of the national interest, and while it is further true, as also

²⁸ 6 ENV'T'L AFF. 373 (1978); *infra* at 97.

²⁹ Construction of the Trans-Alaska Oil Pipeline was held up for at least three years by litigation focusing on, *inter alia*, EIS sufficiency, culminating in an inconclusive decision in *Wilderness Society v. Morton*, 479 F.2d 842 (D.C. Cir.), *cert. denied*, 411 U.S. 917 (1973). To avoid the further delay entailed by the remand ordered in that decision, Congress, prodded by the severe oil shortage then occurring as a result of the Arab oil embargo, passed the Trans-Alaska Pipeline Authorization Act, 43 U.S.C. §§1651 *et seq.*, which exempted the final EIS on the project from further judicial review and ordered the immediate issuance of the pipeline permits.

³⁰ As of this writing, the most recent attempt at Tellico Dam exemption from the Endangered Species Act was an August, 1979 vote, 258 to 156, in the House of Representatives in favor of such exemption. See *Land Use Planning Report*, Vol. 7, No. 32, at p. 248 (8/6/79).

³¹ Alaska Natural Gas Transportation Act, 15 U.S.C. §§719 *et seq.*

argued by Taylor, that direct environmental decisionmaking by Congress is, in a sense, more democratic, one cannot help but wonder whether the increased use of such preemptive legislation might not get out of hand and ultimately undermine the workability and fairness of the entire NEPA scheme. After all, the original decision to place responsibility for environmental impact assessment in the hands of an administrative/judicial/citizen-litigant partnership, embodied in the EIS process as we presently know it, was founded upon a realization that the democratic legislative process alone was insufficiently responsive to environmental considerations. Taylor suggests that the preemption route be limited to "large-scale projects [which] substantially affect the national interest,"³² but, of necessity, fails to offer how that limitation could be enforced in practice.³³ Events following the renewed energy shortages of 1979 seem to give credence to environmentalists' fears that the political process, operating in an electoral frame of reference, may be all too willing, given the opportunity, to forsake long-term environmental values for short-term advantage.³⁴

The article, "Implementation of the Environmental Impact

³² Taylor, *infra* at 111.

³³ Taylor recognizes this problem, but limits himself to a descriptive list of generalized factors to be considered in designating a project as one of "crucial" national importance. *Id.*, *infra* at 111-12.

³⁴ Thus, President Carter's "energy program" released in July, 1979, in response to the public's distress over having to wait in lines at gas pumps, placed much greater stress on development of synthetic fuels and nuclear energy than on encouraging long-term patterns of conservation or shifts to solar energy. In pursuit of this program, he proposed creation of an "Energy Mobilization Board," with the power to "waive" environmental and land use laws which might hamper such energy development. See *Land Use Planning Report*, Vol. 7, No. 31, at p. 238 (7/30/79); also Vol. 7, No. 32, at p. 245.

This emphasis upon sustained high energy consumption, though ostensibly politically more palatable, runs counter to a growing body of thought that the emphasis ought, rather, to be upon more conservation and solar use, as urged in *Soft Energy Paths: Toward a Durable Peace*, by Amory B. Lovins (Ballinger, 1977) and in *Energy Future: Report of the Energy Project at the Harvard Business School*, edited by Robert Stobaugh and Daniel Yergin (Random House, 1979). See also article, N.Y. Times, 7/12/79, at p. A1, *Harvard Study Urges Conservation and Solar Use Over Synthetic Fuel*.

In these circumstances, Rep. Edward Markey of Massachusetts, questioned whether legislation establishing an Energy Mobilization Board with preemptive waiver power over environmental controls might not turn out to be "an energy Gulf of Tonkin resolution" (referring to the now-discredited legislation by which Congress gave President Johnson a free hand over American involvement in the Vietnam War). In a later environmental message to Congress, President Carter sought to reassure that his energy plans would not mean a forsaking of environmental policy. See article, N.Y. Times, 8/3/79, at p. A24, *President Pledges Energy Crisis Won't Alter Environment Goals*.

Statement,"³⁵ reflects dissatisfaction with the way the EIS process has functioned to date, not from the viewpoint of the delays which it has engendered, but, rather, by questioning whether it has functioned to produce environmentally sounder decision-making. The article observes that the major (and optimistic) premise behind the EIS process was that improved decision-making would result from (1) forcing greater self-evaluation on agencies by requiring them to expand the universe of information on which decisions are based and (2) informing others, *e.g.*, citizens, Congress, and other agencies, so as to invite their input into the decisionmaking. The article finds, however, that "[t]he assumption that environmental quality could be enhanced simply by increasing information and agency disclosure . . . has proved fallacious."³⁶ Reasons cited for this failure include the agencies' mission-oriented natures and the courts' exclusive focus upon procedural, rather than substantive, compliance with NEPA. The exclusive focus upon procedural compliance has induced agencies to prepare overly voluminous EIS's, full of remote or irrelevant information, so as to make them "airtight" against all conceivable procedural challenges, which in turn has decreased the usefulness of EIS's in their supposed primary function of conveying accessible, significant information to concerned third parties and members of the public at large.

The article does not especially fault the courts for their exclusive procedural focus, recognizing that there has been a lack of standards under which a court could, for example, order an agency to pursue one course of action in preference over another. The result has been that once an agency has complied procedurally by preparing an EIS which is facially considerative of all alternatives, the ultimate agency decision, whether reflective of considerations set forth in the EIS or not, is unassailable. Further undermining the present utility of EIS's in the scheme of things, according to the article's author, is the fact that their role is treated as being at an end once project approval is received. EIS's have not been viewed in their potentially valuable role as standards by which implementation of projects can be governed on a continuing basis nor has post-approval monitoring of projects been conducted to determine whether, either as a general rule or in particular cases, the consequences predicted in EIS's have been realized.

³⁵ 88 YALE L. J. 596 (1979), *infra* at 115.

³⁶ *Id.*, *infra* at 118.

In remedy of these perceived deficiencies, *i.e.*, the lack of standards by which to judge the merits of a chosen course of action and the lack of follow-up procedures, the article proposes certain amendments to the Council on Environmental Quality's regulations.³⁷ These would require that an agency:

“(a) adopt all practicable mitigation measures available for the alternative chosen and identified as practicable in the EIS;

“(b) produce a public record of decision that shows the alternative chosen and the mitigation measures adopted, and that explains why mitigation measures identified in the EIS but not adopted are impracticable;

“(c) implement or enforce all mitigation measures adopted either through the plans, designs, recommendations, and actions of the agency or through conditions on grants and licenses given to other parties;

“(d) supervise implementation of the mitigation measures to ensure their use and establish a monitoring program to observe and verify the effects of mitigation measures predicted in the EIS;

“(e) publicize the results of monitoring programs with comparisons of the predicted and observed effects of the mitigation measures implemented, and use those results in future, similar EISs.”³⁸

The benefits stemming from adoption of regulations such as the above are arguably manifold. First, by requiring an agency to identify all alternatives and mitigation measures, and to classify each identified mitigation measure as either “practicable” or “impracticable,” with justificatory cost-benefit analysis set forth, and explicit record of agency decisionmaking is created which is more amenable to judicial review of the merits—as contrasted with the present situation in which judicial review is

³⁷ 40 C.F.R. §§1500 *et seq.*

³⁸ “Implementation of the Environmental Impact Statement,” *infra* at 124-25. The article points out that amendments proposed to the CEQ regulations in 1978 (*see* 43 Fed. Reg. 25,230), would have a similar effect, but finds such amendments deficient in certain respects.

limited to the largely procedural issue of whether environmental impacts have been "considered."³⁹ Second, by creating an ongoing duty on the part of the agency to implement and monitor, the EIS is given a practical and enforceable function beyond the initial stage of mere project approval.⁴⁰ Third, because all identified adverse impacts will presumptively require mitigation measures, because the EIS will be subject to substantive review, and because the EIS will set standards against which project performance is to be measured, it may be hoped that agencies will prepare more thoughtful, concise EIS's devoted to truly serious impacts, in contrast to the voluminous and rambling "pro forma" statements currently generated by agencies in defensive anticipation of the purely procedural test which asks whether all impacts have been considered.⁴¹ Finally, because impacts and mitigation measures will be monitored and compared with the EIS projections and the results of such study publicized, knowledge, currently unavailable, as to the accuracy and usefulness of EIS projections, both in general and as concerns specific types of environmental consequences, will be generated which hopefully will serve as input toward improving the EIS process in the future.⁴²

3. Environmental Litigation

As demonstrated by the articles concerning NEPA and the EIS process, discussed above, and by the articles concerning pollution control, discussed below, the nature of environmental laws is frequently such that they must, of necessity, be written in broad, generalized language, with the task of giving them specific meaning left to administrators and the courts. Thus, as in the case with constitutional law, much of the substance of environmental law is determined by litigation.

The article, "Environmental Litigation: An Analysis of Basic

³⁹ *Id.*, *infra* at 129.

⁴⁰ Under the regulations proposed in this article imposing a continuing duty upon agencies to implement EIS mitigation measures, the First Circuit Court of Appeals in *Ogunquit Village Corp. v. Davis*, 553 F.2d 243 (1st Cir. 1977), would have had a clear predicate upon which to order the Soil Conservation Service to go back and repair the damage caused by its botched sand dune reconstruction project. See article, "Ogunquit Village Corp. v. Davis and Judicial Relief Under the National Environmental Policy Act: The Completed Project Problem," *infra* at 49; also discussed *supra* at note 18 *et seq.*

⁴¹ See article, "Implementation of the Environmental Impact Statement," *infra* at 127, note 62.

⁴² *Id.*, *infra* at 119-20, 127.

Strategies, Procedures, Substantive Rights and Their Effects,"⁴³ by Joseph Z. Fleming, provides valuable, straightforward advice on how best to represent a party in environmental litigation. For anyone who may be involved in environmental litigation, if only one article in this volume is to be read, this should be the one.

Drawing on his personal experience as an environmental attorney, Fleming emphasizes the importance of early, thoroughgoing analysis as to choice of forum and strategy.⁴⁴ Included in such analysis must be a consideration also of the strategic options likely to be pursued by one's adversary.⁴⁵ Where a specific project is involved, early assessment must be made of which government agencies have jurisdiction and of which permits will be required.⁴⁶ Likewise important is an early assessment of who are the parties interested, or potentially interested, in a project, so as to identify probable allies and opponents.⁴⁷ Stressed is the fact that such early strategic planning is crucial in order to avoid later costly disappointments.⁴⁸

The term "environmental litigation" conjures up images of armies of expert witnesses and mountains of transcripts, all with huge attendant costs. Fleming stresses, however, that this need not be the case and throughout the article suggests cost-saving strategies. These include trying, wherever possible, to proceed in an administrative rather than judicial forum, so that relaxed rules of procedure will facilitate the introduction of evidence;⁴⁹ arranging matters so that a government agency undertakes the burden of litigating one's position;⁵⁰ challenging one's adversaries on grounds of standing, laches or mootness wherever possible;⁵¹ using stipulations and depositions of opponents to remove issues from dispute;⁵² and drawing on available sources of technical data, *e.g.*, Environmental Impact Statements, government studies, etc., in preference to generat-

⁴³ 9 St. Mary's L. J. 749, *infra* at 133.

⁴⁴ *Id.*, *infra* at 135, 163.

⁴⁵ *Id.*, *infra* at 163.

⁴⁶ *Id.*, *infra* at 136.

⁴⁷ *Id.*, *infra* at 136-38.

⁴⁸ *Id.*, *infra* at 135-36, 163.

⁴⁹ *Id.*, *infra* at 149-50, 152, 154-55.

⁵⁰ *Id.*, *infra* at 150.

⁵¹ *Id.*, *infra* at 139-46.

⁵² *Id.*, *infra* at 156-58.

ing one's own studies.⁵³ Finally, if litigation does come to the point of requiring the use of expert witnesses, the article concludes with suggestions as to how such witnesses may be utilized to best effect.⁵⁴

As with any litigation, often the outcome of an environmental case turns not so much on the substantive legal standards governing environmental conduct as it does on the procedural rules determining which party must bear burden of proof or persuasion on the question of whether those substantive standards are being met. The article, "Shifting the Burden of Proof in State Environmental Protection Acts: A Blessing to Environmental Plaintiffs,"⁵⁵ by Diane L. Alessi, Marcia J. Wright, and Mary P. Treiber, describes how six states—Michigan, Illinois, Minnesota, Connecticut, Indiana and South Dakota—have incorporated into their environmental legislation provisions which not only give citizen-plaintiffs standing to enforce environmental standards but which also ease such plaintiffs' burden of proof so as to make such suits realistically feasible.

Easing the plaintiff's burden of proof in environmental litigation is a recurrent theme in environmental literature and legislative reform efforts.⁵⁶ Calls for shifting the burden of proof to environmental defendants flow basically from two realizations: first, that the anticipated harm will usually occur in the future, is to some degree unmeasurable and speculative, and is therefore incapable of "proof" in the traditional legal meaning of that term; and, second, that information as to significant project effects and the feasibility of alternatives is usually more accessible to a project's proponents than to its opponents.⁵⁷

The statutes of the six states discussed in the article are all basically similar and are modeled after the first adopted among

⁵³ *Id.*, *infra* at 153-56.

⁵⁴ *Id.*, *infra* at 158-163.

⁵⁵ 8 ENV'T L. 851 (1978), *infra* at 165.

⁵⁶ See, e.g., the article, "Law and the Dignity of Nature: Foundations of Environmental Law," by Kenneth A. Manaster, 26 DE PAUL L. REV. 743 (1977), reprinted in last year's volume of this series. 9 LAND USE & ENVIRONMENT L. REV. 3 (1978), which argued, in general, for putting a legal value on the natural status quo and for requiring the polluter, developer, or proponent of technological change to show that its actions *will not be* harmful to the environment rather than, as is traditional, requiring the adversary to show that such actions *will be* harmful.

⁵⁷ The same considerations underlie the reforms proposed in the article "Implementation of the Environmental Impact Statement," *infra* at 115 and discussed *supra* at note 20 *et seq.* The regulatory reforms proposed therein would presumptively require the utilization of all mitigation measures identified in an EIS unless persuasively shown to be "impracticable."

them: the Michigan Environmental Protection Act of 1970.⁵⁸ Essentially, they permit a citizen-plaintiff to establish a *prima facie* case simply by showing that the conduct of the defendant has, or is likely to, "impair, pollute or destroy" natural resources within the state. The plaintiff having established such a *prima facie* case, the burden shifts to the defendant either to rebut by showing evidence that there is no environmental harm or to establish the affirmative defense that there is no feasible and prudent alternative to the conduct complained of. The article notes some differences between the states' statutes: significantly, Minnesota's statute, which mandates consideration of other state environmental regulations and permit requirements, and which explicitly provides that "[e]conomic considerations alone shall not constitute a defense hereunder";⁵⁹ and Illinois, which has established an Environmental Protection Agency and a Pollution Control Board to administer its Act.⁶⁰

The article finds that although, with the exception of Illinois, litigation under the statutes has been very limited, those reported appellate decisions which have construed the statutes to date have given them their intended forceful effect, boding well for their future use and adoption in other states.⁶¹

4. Energy and the Environment

"America's energy problems . . . result from the nation's prodigious consumption of energy, coupled with its over-reliance on dwindling petroleum resources and its under-reliance on abundant domestic energy alternatives. The United States can move toward a state of energy self-sufficiency only by pursuing both an aggressive conservation policy and a vigorous energy research, development, and demonstration (RD&D) program." So begins the article, "National Energy Planning and Environmental Responsibility,"⁶² by Robert C. Seamans, Jr., James L. Liverman and Frederick I. Ordway, all

⁵⁸ Mich. Stat. Ann. §§14.528(201)-(207) (1976).

⁵⁹ Minn. Stat. §116 B.04 (1977).

⁶⁰ Ill. Rev. Stat. Ch. 111-½, §§1001-1051 (Supp. 1973). The article's authors find the Illinois statute, with its provisions for agency enforcement and administrative rather than judicial trials, to be sufficiently distinct to merit separate discussion. See *infra* at 177-81.

⁶¹ Alessi, Wright, and Treiber, *infra* at 181-82.

⁶² ENV'T'L AFF. 283 (1978), *infra* at 185.

of whom were formerly executives of the U.S. Energy Research and Development Administration, an executive branch agency whose functions were absorbed into the U.S. Department of Energy, established in October, 1977. Inclusion of the article at the head of this part of the volume, entitled "Energy and the Environment," was thought valuable for two reasons. First, it contains an admirably comprehensive survey of potential energy sources and technologies, of both the conventional and exotic variety.⁶³ Second, it offers insight, for better or worse, into the current national administration's mind set vis à vis approaches to dealing with the nation's "energy problem."

The article's authors describe how the federal government's approach has been to plan energy strategies for the near-term (now to 1985), for the mid-term (1985 to the end of the century), and for the long-term (beyond the year 2000).⁶⁴ After discussing potentials for conservation,⁶⁵ the article moves to consideration of further developable energy sources, giving indications as to how they variously fit into the federal near-term, mid-term, or long-term strategies, and as to the technological feasibility and environmental risks of each.⁶⁶ These sources include increased burning of coal⁶⁷ (potentially enhanced by a process known as "fluidized-bed combustion"), generation of electric power by use of uranium (nuclear fission), enhanced recovery of oil and gas, solar power⁶⁸ (both for passive use and generation of electricity), geothermal power⁶⁹

⁶³ The only currently discussed new energy technology overlooked by the authors, so far as this writer can observe, is the combustion of hydrogen for the generation of vehicular power, a concept which has recently received considerable attention among scientists and technologists. Also curiously omitted from the authors' discussion is increased use of traditional hydroelectric power, *i.e.*, dams.

⁶⁴ Seamans, Liverman and Ordway, *infra* at 187-88.

⁶⁵ *Id.*, *infra* at 189-202. See also discussion, *infra*, at note 71 *et seq.*

⁶⁶ Environmentalists may well find the authors' assessments of environmental risks to be understated and overly optimistic. Thus, writing of nuclear generation of electric power and recommending its increased use, the authors cite that it is "popular" with "consumers" because of its relative cheapness, and proclaim that "... nuclear generating plants have excellent environmental and safety records. No individual has suffered injury from a radiation-related accident within the United States commercial nuclear power industry." The authors go on to note some misgivings concerning management of nuclear wastes, but express optimism that a safe method of disposal will eventually be developed. Seamans, Liverman and Ordway, *infra* at 194-95.

⁶⁷ See article, "Coal in Context: Its Role in the National Energy Future," by John P. Holdren, *infra* at 203 and discussed in this Introductory Survey, *infra* at note 76 *et seq.*

⁶⁸ See article, "Solar Heating and Cooling: State and Municipal Legal Impediments and Incentives," by Mary Schiflet and John V. Zuckerman, *infra* at 249 and discussed in this Introductory Survey, *infra* at note 99 *et seq.*

⁶⁹ See article, "An Environmental Overview of Geothermal Resources Develop-

(again for both passive use and generation of electricity), development of synthetic liquid and gas fuels (not only from coal and oil shale, but from wastes and from crops grown for their energy potential), use of windmills, generation of electricity from ocean thermal gradients, and finally, nuclear fusion (liquid metal fast breeder reactors). The authors hold out great hope for the last of these alternatives, *i.e.*, nuclear fusion in liquid metal fast breeder reactors, as a long-range, environmentally safe, potentially inexhaustible source of energy—a position which, however, seems curiously at odds with President Carter's decision to halt their development.⁷⁰

Without detracting from the usefulness or accuracy of the technological prognostications set forth by Seamans, Liverman and Ordway concerning development of various alternate energy sources, what is disappointing is their evident lack of emphasis upon energy conservation. To the extent that their views may be presumed to embody the views of the current national administration, this is all the more disappointing. Thus, in the portion of their article devoted to energy conservation,⁷¹ under the heading "Transportation," only improvements to automobile engine efficiency are evaluated, with nary a mention of whether changes in our land use patterns or switches to mass transportation should be considered.⁷² Perhaps such downplaying of the importance of conservation is to be expected, given their explicit assumption, stated in the first sentence of the article that we have "abundant domestic energy alternatives" which need only to be developed and utilized.⁷³ The authors' apparent premise that capital-intensive technology and development will permit us to sustain current high levels of energy consumption and maintain environmental quality at the same time,⁷⁴ it should be noted, is coming increasingly under attack.⁷⁵

ment," by A. Dan Tarlock and Richard L. Waller, appearing in last year's volume of this series, 9 LAND USE & ENVIRONMENT L. REV. 339 (1978).

⁷⁰ Seamans, Liverman and Ordway, *infra* at 199-201.

⁷¹ *Id.*, *infra* at 189-92.

⁷² *Id.*, *infra* at 189-90.

⁷³ *Id.*, *infra* at 185.

⁷⁴ Thus, although the authors note concern over the increasing levels of carbon dioxide (CO₂) in the earth's atmosphere, resulting from the burning of fossil fuels and leading to fears about effects upon the earth's climate, much of their proposed energy program, when the more exotic or costly alternatives are eliminated therefrom, place continued reliance upon such burning of fossil fuels, *Id.*, *infra* at 193, note 23.

⁷⁵ See, e.g., *Soft Energy Paths: Toward a Durable Peace*, by Amory B. Lovins (Ballinger, 1977) and *Energy Future: Report of the Energy Project at the Harvard Business School*, edited

A view placing more emphasis on conservation is presented in "Coal in Context: Its Role in the National Energy Future,"⁷⁶ by John P. Holdren. According to Holdren, the traditional view of our energy problem needs to be reassessed. Thus, when long-term environmental costs are included in the calculation, he suggests, it is possible that we, as a society, have suffered "from having too much energy, too soon" rather than "from having (in the more traditional view of the energy problem) too little, too late."⁷⁷ He sees hope for the long-range solution as lying in the use of more conservative techniques of energy application and the development of renewable energy resources, which he defines as "mainly solar heat, biomass, wind, hydropower and solar electricity."⁷⁸ Holdren recognizes, however, that development of those solutions is still many years off and that in making the transition, over the mid-term period, it will be necessary to find readily developable energy source alternatives to compensate for the rapidly dwindling availability of oil and gas. It is in this context that the article offers a multi-faceted consideration of the potential benefits and detriments of the increased use of coal.

One of the obvious beneficial attributes of coal is its plentitude within our borders. Holdren calculates, based on the assumption that half of the coal in our ground is recoverable, that U.S. coal reserves amount to up to one hundred times the energy content of recoverable U.S. petroleum reserves, fifteen times the energy content of OPEC oil reserves, and also fifteen times the energy potential of U.S. uranium resources.⁷⁹ Another obvious benefit is its relative cheapness.⁸⁰ Finally, so far as the mining process itself is concerned, Holdren finds that mine worker health and safety, although still sometimes neglected, can and has, in specific instances, been brought up to levels prevailing in industry generally;⁸¹ and that environmentally adequate strip mining reclamation can be performed, even in

by Robert Stobaugh and Daniel Yergin (Random House, 1979). *See also* the "Book Review," by Chris Schroeder appearing in 7 *ECOLOGY L. Q.* 171 (1978), reviewing and criticizing the three annual reports of the Energy Research and Development Administration (the agency which the authors of the present article headed) for those reports' neglect in considering energy reduction strategies.

⁷⁶ 15 *HOUS. L. REV.* 1089 (1978), *infra* at 203.

⁷⁷ *Id.*, *infra* at 203-04.

⁷⁸ *Id.*, *infra* at 207.

⁷⁹ *Id.*, *infra* at 207-8.

⁸⁰ *Id.*, *infra* at 208.

⁸¹ *Id.*, *infra* at 208, 218-19.

the most difficult circumstances, for no more than \$3 per ton of coal mined, permitting coal to remain cost competitive.⁸²

It is in the use, through burning, of coal that more difficult problems are foreseen. First, coal as a fossil fuel is relatively inversatile in comparison to petroleum, due to its bulk, solid nature, and relatively dirty burning characteristics.⁸³ These attributes presently limit its use mostly to large electric generating stations located away from population centers. Ways of increasing versatility are foreseen through improved pollution control techniques and perfection of fluidized-bed technologies. Such steps would permit coal to more readily be burned in smaller scale dual-purpose facilities (*e.g.*, for generation of electricity combined with residential heating) in urban centers.⁸⁴ Alternatively, versatility could be greatly increased by conversion of coal to gas and liquid form, *i.e.*, "synfuels," but large scale development of conversion facilities is seen as still remote, costly and environmentally uncertain.⁸⁵

Distinct from, though related to, coal's inversatility are environmental pollution problems, which the article discusses at length. These include air pollution and attendant health hazards, especially as relates to sulfur oxides and particulates;⁸⁶ increases in atmospheric carbon dioxide (CO₂) and the potential effect thereof upon climate;⁸⁷ and problems associated with acid water effects upon the ecosystem.⁸⁸

Holdren concludes that the abundant availability of coal should not be viewed as an escape hatch by which America can avoid its obligation, beginning immediately, to more toward more conservative energy usage and the development of technologies based on renewable energy sources. "In the context of the picture of energy situation painted here, coal is far from an ideal energy source. The versatility to permit coal to meet the full spectrum of end-use needs will be won only dearly; its manifold environmental costs will remain troublesome; and someday, unlike the renewables, it will be gone. But in the context of the near-term and medium-term alternatives, coal is too good not to use."⁸⁹

⁸² *Id.*, *infra* at 219-20.

⁸³ *Id.*, *infra* at 209-12.

⁸⁴ *Id.*, *infra* at 210.

⁸⁵ *Id.*, *infra* at 210-11.

⁸⁶ *Id.*, *infra* at 213-215.

⁸⁷ *Id.*, *infra* at 215-16.

⁸⁸ *Id.*, *infra* at 216-17.

⁸⁹ *Id.*, *infra* at 223.

The article, "Energy Conservation: The Federal-State Nexus,"⁹⁰ by Michael W. Grainey, emphasizes not only the need for greater energy conservation, but also develops the theme that conservation can be effectively achieved only through cooperative federal-state efforts.⁹¹ Grainey, whose experience in the area includes service as Special Assistant to the Director of the Oregon Department of Energy, points out that only the states, with their tradition of jurisdiction over matters such as traffic rules, building code standards, public education, land use regulations and the like, are situated and have the personnel to carry out national energy conservation policies effectively and economically.

Grainey's article traces how, under the prod of the Energy Conservation and Production Act of 1976⁹² and the Energy Policy and Conservation Act of 1975,⁹³ all fifty states have adopted energy conservation goals and programs, some of which are administered by state cabinet-level agencies.⁹⁴ Giving examples of outstanding efforts by particular states, the article discusses numerous areas in which state actions can bring about reductions in energy consumption. These include: imposing stringent insulation and lighting efficiency standards in building codes; requiring electric utilities to abandon practices, such as master metering and bulk rate discounts, which encourage wasteful energy usage; integrating fuel conservation subjects into driver education programs; graduating automobile sales taxes and registration fees on the basis of fuel economy; encouraging carpooling and mass transit use; requiring home sellers to furnish buyers with documentation of a dwelling's previous year's heating costs; establishing tax incentives for

⁹⁰ 27 AM. U. L. REV. 611, *infra* at 225.

⁹¹ The idea that much greater cooperation and coordination between levels of government are needed to effectively deal with problems of energy and the environment was a major theme of the articles included in last year's edition of LAND USE & ENVIRONMENT L. REV. See, e.g., "Pyramids of Sacrifice? Problems of Federalism in Mandating State Implementation of National Environment Policy," by Richard B. Stewart, 86 YALE L. J. 1196 (1977), reprinted at 9 LAND USE & ENVIRONMENT L. REV. 147 (1978); and "Energy Policy: A Test for Federalism," by Jon Mills and R.D. Woodson, 18 ARIZONA L. REV. 405 (1976), reprinted at 9 LAND USE & ENVIRONMENT L. REV. 291 (1978); both of which articles are cited Grainey, *infra*.

⁹² Pub. L. No. 94-385, 90 Stat. 1125 (codified in scattered sections of 15, 42 U.S.C.), discussed *infra* at 227, 232 *et seq.*

⁹³ Pub. L. No. 94-163, 89 Stat. 871 (codified in scattered sections of 12, 15, 42 U.S.C.), discussed *infra* at 227, 232 *et seq.*

⁹⁴ Grainey, *infra* at 238, note 89.

home insulation and solar use; offering free technical advice and building energy audits; and, finally, forcing energy conservation practices upon state agencies themselves.⁹⁵ These and other initiatives cited are praised by Grainey as steps in the right direction, but he finds that federal leadership in this area has not been sufficiently aggressive nor sufficiently funded.⁹⁶ "If energy conservation is to have a significant impact, coordinated efforts at all levels of government and private sector will be required."⁹⁷ ". . . Energy conservation must be addressed comprehensively by establishing a national framework in which the conservation efforts of federal, state and local governments can be harmonized to produce the greatest impact. The current lack of a national energy plan seriously undermines existing energy saving efforts."⁹⁸

A particular area in which state and local governments can aid in the solution of the national energy/environment problem is that of promoting use of solar energy, which is the subject of the article, "Solar Heating and Cooling: State and Municipal Legal Impediments and Incentives,"⁹⁹ by Mary Schiflett and John V. Zuckerman. The appearance of the article in this volume makes this the third year in a row that this series has presented articles devoted to the removal of legal and institutional barriers to solar use.¹⁰⁰ It is gratifying to see, during this same period of time, how quickly solar devices have captured the public's imagination and legal changes promoting their feasibility have occurred.¹⁰¹ The speed and breadth of this development may be appreciated by realizing, for example,

⁹⁵ See generally, *id.*, *infra* at 238 *et seq.*

⁹⁶ See *id.*, *infra* at 242, note 109 *et seq.*, where Grainey computes that federal funding for the establishment of state energy conservation programs over the past four years has averaged less than two million dollars per state per year. Grainey comments that "[t]his low level of funding suggests that state programs are treated as merely experimental and demonstrates that the federal government does not appreciate fully the tremendous impact an aggressive energy conservation effort can have on the current energy shortage." *Ibid.*

⁹⁷ *Id.*, *infra* at 231.

⁹⁸ *Id.*, *infra* at 246.

⁹⁹ 18 NAT. RESOURCES J. 313 (1978), *infra* at 249.

¹⁰⁰ See Becker, "Common Law Sun Rights: An Obstacle to Solar Heating and Cooling?", 3 J. CONTEMP. L. 19 (1976), reprinted at 8 ENVIRONMENT L. REV. 167 (1977); and Goble, "Solar Rights: Guaranteeing a Place in the Sun," 57 ORE. L. REV. 94 (1977), reprinted at 9 LAND USE & ENVIRONMENT L. REV. 375 (1978).

¹⁰¹ See article, N.Y. Times, 8/13/79, at p. D8, *Solar Energy Incentives Spur Development*. This same newspaper article shows a table giving a state-by-state record of what legal incentives have been enacted into state law to date.

that California's retail market for solar devices is expected to surpass \$175 million dollars in 1979,¹⁰² that beginning October 1, 1980, solar hot water systems will be required in all newly built homes in unincorporated areas of San Diego county,¹⁰³ and that courts will now often overturn zoning barriers to the use of solar devices upon a property owner's complaint.¹⁰⁴

The present article by Schiflett and Zuckerman, in contrast to many other articles on the subject, deals not only with the problem of zoning and access to sunlight, but takes into consideration such diverse aspects as the marketing and financing of solar devices; questions of tax incentives (including sales tax, property tax, corporate income tax and personal income tax); problems of product warranty, design, and aesthetics; labor regulations; insurance; and the highly important issue of the role of electric and gas utilities vis à vis their customers' solar usage. Overshadowing all of the above, and discussed by Schiflett and Zuckerman at the end of the article, is the question of securing a change in public and institutional skepticism toward the viability of solar heating and cooling.¹⁰⁵

5. Pollution Control

Almost without doubt, the most problematical area of environmental law is pollution control. Thus, whereas a national political consensus to the effect that "We want wilderness areas saved and preserved for future generations" may be realized through the national legislative process rather easily by government acquisition of land, the establishment of park boundaries, and the patrolling of parks by a relatively few rangers, the national political consensus that "We want clean air and water in our environment" is infinitely more difficult to accomplish. Factors leading to this difficulty include the large number of kinds of pollutants and sources emitting them, the fact that each pollutant and each source varies in its potential for harm and in its cost of clean-up or elimination, and the high level of technical knowledge required for understanding and manag-

¹⁰² *Ibid.*

¹⁰³ *Ibid.*

¹⁰⁴ See, e.g., article, N.Y. Times, 5/19/79, at p. 26, *Lawyer Wins Zoning Battle to Add Solar Heating Unit.*

¹⁰⁵ Schiflett and Zuckerman, *infra* at 269-72.

ing pollution's effects. Exacerbating the difficulty is the fact that the parties creating the pollution frequently are not the parties (who are usually located downwind or downstream) suffering its consequences. All of these factors, of necessity, have limited the national legislative response to the establishment of programs of the barest outlines and general principles, with much of the filling in of details left to be done by federal administrators, state and local governments and, in some cases, by the polluting industries themselves. Predictably, the filling in process, as described in the articles in this section, has not been a totally smooth one.

The problems of Congress's lack of technical expertise and inability to tailor laws to specific circumstances has led Congress to write many of its pollution control laws in terms of what Professors James A. Henderson, Jr. and Richard N. Pearson refer to as "aspirational commands" in their article, "Implementing Federal Environmental Policies: The Limits of Aspirational Commands."¹⁰⁶ Unlike a traditional law, which says to the party whose conduct is attempting to be controlled, "You must do this specific thing" or "You are prohibited from doing this specific thing," and sets forth a punishment for violation of the law, the essence of an aspirational command is that it attempts to compel a party to "aspire" or "do its best" to alter its conduct in some direction. Part of the nature of an aspirational command is that it delegates to the controlled party (who presumably has motivation to resist the command) the responsibility to design the specifics of the conduct which will constitute compliance. Also inherently part of the nature of an aspirational command is that it is difficult, because of a lack of objective criteria, to define what constitutes compliance.

In the view of authors Henderson and Pearson, aspirational commands as a mode of lawgiving are best to be avoided because their inherent vagueness and nonverifiability (how is the defense, "... but I tried my best," to be refuted?) inevitably make such commands unenforceable and, therefore, ultimately, lead to disrespect for the law. In support of this thesis, the article discusses at length four examples of aspirational commands utilized (unsuccessfully, in the authors' view) in environmental control law: (1) the auto emission reduction provisions in the 1970 and 1977 amendments to title I of the

¹⁰⁶ 78 COLUM. L. REV. 1429 (1978), *infra* at 275.

Clean Air Act;¹⁰⁷ (2) the discovery orders and injunctions issued in the *Reserve Mining* litigation;¹⁰⁸ (3) the planning responsibilities of federal agencies under the National Environmental Policy Act of 1969;¹⁰⁹ and (4) the enforcement responsibilities of the states under the 1970 and 1977 amendments to title I of the Clean Air Act.¹¹⁰

In their conclusion, the authors relent slightly in their criticism of the use of aspirational commands, admitting, for example, that aspirational commands may serve a function in bringing about changed attitudes towards environmental protection,¹¹¹ and that technology-forcing laws (the quintessential example of aspirational commands) are an understandable, if not laudable, approach for Congress to take in dealing with industries and institutions whose technical expertise is superior to its own.¹¹² Nevertheless, the authors suggest that the use of aspirational commands in environmental law represents a legislative "cop-out," permitting Congress to take "a relatively high sounding, seemingly low cost road" in preference to the harder alternatives of the federal government developing its own expertise, so as to be able to issue specific commands, or of undertaking a fundamental restructuring of our society's institutions so that they better reflect environmental values.¹¹³

Many of the enforcement problems which Henderson and Pearson find to be inherent in aspirational commands surfaced in experience under the Clear Air Act of 1970.¹¹⁴ Particularly apparent was the failure of the states to submit State Implementation Plans (SIP's) within the deadlines called for. Other problems involved insufficiency of federal funding, unanticipated delay factors, the setting of overly ambitious attainment goals which emphasized air quality to the exclusion of other policy considerations, intergovernmental friction, and underutilization of input and participation by local government units below the state government level. The article, "The National Quest for Clean Air 1970-1978: Intergovernmental Problems and Some Proposed Solutions,"¹¹⁵ by William V.

¹⁰⁷ *Id.*, *infra* at 291-99.

¹⁰⁸ *Id.*, *infra* at 299-302.

¹⁰⁹ *Id.*, *infra* at 302-08.

¹¹⁰ *Id.*, *infra* at 308-14.

¹¹¹ *Id.*, *infra* at 314.

¹¹² *Id.*, *infra* at 315.

¹¹³ *Id.*, *infra* at 315-16.

¹¹⁴ 42 U.S.C. §§7401-7642.

¹¹⁵ 73 Nw. U. L. Rev. 397 (1978), *infra* at 317.

Luneburg thoughtfully develops these themes, giving consideration to whether changes wrought by the Clean Air Amendments of 1977¹¹⁶ may or may not help in specific instances. Luneburg concludes that the intergovernmental scheme chosen for implementation of national air pollution control is a basically sound one and praises the greater role given local governments under the 1977 amendments,¹¹⁷ but predicts that continued intergovernmental friction will arise from the inflexibility of attainment standards, insufficiency of federal funding (particularly as involves mass transit facilities), and the technical complexity of the Act as amended.¹¹⁸

The article, "Federal Enforcement Proceedings Under the 1977 Clean Water Act,"¹¹⁹ by Sanford L. Hartman, tells a similar sad story of the initial overly-ambitious setting of deadlines, inadequacy of federal funding, bureaucratic delays, and intergovernmental friction—only this time with reference to water pollution control as governed first by the Federal Water Pollution Control Act of 1972¹²⁰ and then by the amending Clean Water Act of 1977.¹²¹ Rather than a consideration of broad policy issues, however, Hartman's article is directed to the more specific question of the extent to which, under prior case law and as affected by the 1977 amendments, the federal government's own bureaucratic delays, insufficiency of funding, or the economic or technological infeasibility of its requirements can serve as defenses for dischargers in federal enforcement proceedings seeking to enforce compliance with deadlines which facially are inflexible.

The article, "Industrial Siting: Allocating the Burden of Pollution,"¹²² by William G. Murray, Jr. and Carl J. Seneker II, approaches the problem of pollution largely from a siting and land use prospective. The authors view the present system under which the siting of new major industrial facilities is accomplished in most jurisdictions as unsatisfactory. Typically so many state, local and, sometimes, federal agencies are involved in the permitting procedure, each potentially with a veto power over the project, that required lead times and preconstruction legal and planning costs have become prohibi-

¹¹⁶ Pub. L. No. 95-95, 91 Stat. 685.

¹¹⁷ Luneburg, *infra* at 331-41.

¹¹⁸ *Id.*, *infra* at 378-82.

¹¹⁹ 51 TEMP. L. Q. 884 (1978), *infra* at 383.

¹²⁰ 33 U.S.C. §§1251-1376.

¹²¹ Pub. L. No. 95-217, 91 Stat. 1566, codified at 33 U.S.C. §§1251 *et seq.*

¹²² 30 HASTINGS L. J. 301 (1978), *infra* at 411.

tive and, in specific cited instances, have resulted in the abandonment of needed new industrial facilities. The authors point out that not only does the present fragmented system place unwarranted financial and time burdens on developers, but they question whether the siting decisions produced under such a system are good decisions in terms of the overall allocation of state resources and environmental protection.

In place of the current fragmented procedures, the authors recommend that the states create industrial siting commissions exercising statewide jurisdiction over the siting of all industrial and energy facilities above a defined size. Such a commission would be an expansion upon the centralization of jurisdiction which some states have already undertaken in regards to certain limited kinds of facilities—for example, in the case of electric power plants.¹²³ Such a commission would be able to design a state master plan which would inventory and show in a rational manner the areas where, due to factors such as the anticipated effects of pollution, nearness to resources and labor markets, availability of water supplies and the like, industrial facilities of certain types can be located with the least adverse social and environmental consequences. Questions needed to be anticipated in the structuring and creation of an industrial siting commission would, as reviewed by the authors, include how members of such a commission would be chosen, the extent to which the resultant master plan would be binding, and the role or input to be allowed to other state agencies and local government.

6. Land Use Control

With each passing year, and with our growing awareness of how local environmental and land use decisions have repercussions beyond local boundaries, there comes a growing dissatisfaction with our traditional system of land use control which, through zoning laws, has historically made local government units the exclusive arbiters of land use. This traditional localization of land use control has come to be recognized as dysfunctional in terms of the greater social good in at least two ways:

¹²³ See, e.g., article, "California's Energy Commission: Illusions of a One-Stop Power Plant Siting Agency," by James R. Asperger, 24 UCLA L. REV. 1313 (1977), reprinted at 9 LAND USE & ENVIRONMENT L. REV. 247 (1978).

first, it results in a lack of coordination, which is a fundamental component of good planning, and, second, it encourages continued socio-economic stratification and discrimination by permitting wealthier communities to use land use controls to maintain their insular character, *i.e.*, by exclusionary zoning practices.

The article, "Beyond the City Limits: Regional Equity as an Emerging Issue,"¹²⁴ by David R. Goldschalk and David J. Brower, traces the steps being taken by all levels of government toward not only "regionalizing" land use decisionmaking, but also toward making regionally decided policies ones which are fair to all segments of society, particularly lower income groups. The concept of regional equity—which is defined as "fairness in the distribution of, and opportunities for access to, developed urban land"¹²⁵—is found to have taken on an added urgency in view of the recent public demand for the adoption of plans which seek to stop or restrain growth.¹²⁶ In some of the instances traced in the article, regional equity has been forced upon unwilling localities by court decisions invalidating exclusionary zoning,¹²⁷ in other instances by federal and state studies and funding requirements,¹²⁸ and in yet other instances has been aggressively adopted by regional councils and planning bodies themselves.¹²⁹ In its most sophisticated form, planning for regional equity has included taking steps in the direction of pooling and sharing regional tax bases.¹³⁰ Goldschalk and Brower lament the fact that the planning bodies seeking incorporation of regional equity into land use controls too often lack the necessary implementive authority,¹³¹ but express an overall optimism about "the emerging thrust toward recognizing regional equity as a key feature in decisions on growth and development."¹³²

Pronouncements of the United States Supreme Court on the subject of land use controls are issued with such relative

¹²⁴ 15 URB. L. ANN. 159 (1978), *infra* at 449.

¹²⁵ *Id.*, *infra* at 450.

¹²⁶ *Id.*, *infra* at 465 *et seq.*

¹²⁷ *Id.*, *infra* at 459 *et seq.*

¹²⁸ *Id.*, *infra* at 451-59.

¹²⁹ *Id.*, *infra* at 476-85.

¹³⁰ *Id.*, *infra* at 474-75. See also, generally, Part 6 of this volume, *infra*, dealing with the use of fiscal and tax considerations as land use control tools.

¹³¹ *Id.*, *infra* at 486-87.

¹³² *Id.*, *infra* at 488.

infrequency that, when they do occur, they justifiably attract considerable attention. So it is with the case of *Penn Central Transportation Co. v. New York City*, 438 U.S. 104 (decided June 26, 1978), in which the Supreme Court upheld New York City's designation of the famed Grand Central Terminal as an historic landmark against the property owner's claim that the restrictions thereby placed upon the property amounted to a taking of property for a public purpose without provision of constitutionally required just compensation. The article, "The Grand Slam Grand Central Terminal Decision: A *Euclid* for Landmarks, Favorable Notice for TDR and A Resolution of the Regulatory/Taking Impasse,"¹³³ by Norman Marcus, traces the background of this case and analyzes what the Supreme Court decision means. Mr. Marcus, who includes photographs of the landmark in his article and who brings to his discussion intimate knowledge of the case acquired through his position as Counsel to the New York City Planning Commission, praises the decision as a needed one, which will legitimize and encourage historic preservation activities by local governments in a fashion akin to the way in which the famed decision in *Euclid v. Ambler Realty Co.*¹³⁴ legitimized zoning over fifty years ago.

As developed in the article, however, it is a mistake to regard the *Penn Central* decision as one dealing solely with historic preservation, for the high Court used the occasion to bring new refinements into the judicial analysis employed for determining when exercises of the police power will be adjudged to have entered the realm of taking so as to constitutionally require compensation to property owners.¹³⁵ As also developed in the article, the Court took the opportunity to voice approval of the concept of Transferable Development Rights (TDR's), thereby legitimizing this much discussed but heretofore generally untested land use control technique.¹³⁶

One of the "hottest" areas of land use control law in recent years has been that involving the extension of public utilities, particularly water and sewer service, to areas of new development. Spurred by a public demand for limits on growth, municipal officials are often tempted to prevent development by refusing to provide needed public utilities in instances where

¹³³ 7 *ECOLOGY L. Q.* 731 (1979), *infra* at 489.

¹³⁴ 272 U.S. 365 (1926).

¹³⁵ Marcus, *infra* at 500-08.

¹³⁶ *Id.*, *infra* at 504-07.

traditional regulatory techniques, such as zoning, would be held invalid if applied for the same purpose. The article, "Public Utility Land Use Control on the Urban Fringe,"¹³⁷ examines the legitimacy of using refusals to provide public utility services as an indirect means of land use control under governing enabling acts and case law. The article finds that although common law doctrines generally preclude withholding of such services as a land use control device,¹³⁸ the Standard City Planning Enabling Act (SCPEA), adopted in various forms in almost all jurisdictions, provides authorization for utility extension land use control in most instances.¹³⁹

7. Fiscal Analysis: A New Land Use Tool

The historically traditional approach to land use control was that of zoning: dividing land into districts and imposing varying rules regarding building size and building usage within various districts. This approach emphasized physical and spatial characteristics, and had much of its genesis in concepts derived from the common law relating to nuisance and private restrictive covenants. Over the years, however, as government services have expanded, all types of taxation have increased, and concepts concerning the attributes of property ownership have changed, the interplays between government taxation, government spending, and the ways in which land is used have become increasingly evident, even if not well understood.¹⁴⁰ It might not be too much of an overstatement to say that government spending¹⁴¹ and taxing¹⁴² policies influence patterns of

¹³⁷ 63 IOWA L. REV. 889 (1978), *infra* at 513.

¹³⁸ *Id.*, *infra* at 515-29.

¹³⁹ *Id.*, *infra* at 529 *et seq.*

¹⁴⁰ In the pioneering work, *Windfalls for Wipeouts*, Donald Hagman and Dean Misczynski, eds. (American Society of Planning Officials, Chicago, 1978), a scheme is proposed for exacting from landowners the increase in the value of their land which results from beneficial government actions (recapture of windfalls) and paying to landowners the decrease in the value of their land which results from detrimental government actions (mitigation of wipeouts). Although this theoretical scheme is perhaps administratively unworkable in practice, it embodies the important recognition that much of today's land values is determined by government actions, not all of which are directly related to zoning.

¹⁴¹ A prime example of this is in the provision of public services, such as water and sewers, as discussed in this article, "Public Utility Land Use Control on the Urban Fringe," *infra* at 513, and discussed *supra* at note 137 *et seq.*

¹⁴² A prime example of this would be the fashion in which federal income tax deductions for home ownership costs contributed to suburbanization in the post-war era.

land use more than do those governments policies, such as zoning, which we openly denominate as "land use controls," and that, thus, the former, although hitherto not recognized as such, constitute an invisible set of land use determinants which, given our current limited state of knowledge, may or may not be working at cross-purposes with those traditional laws by which we attempt to direct land use solely on the basis of rules as to permitted spatial and physical characteristics.

It is very much to be anticipated that land use control will increasingly adopt a "fiscal" mode—which is to say that desired patterns of land use will be aimed for more through the structuring of financial incentives and burdens than through outright commands as to what may or may not be built. Fiscal land use control is already evident in the use of tax abatements, *e.g.*, to stimulate urban redevelopment or farmland preservation, in the frequent shifting of the burden of the costs of supplying public utility infrastructure to developers, *i.e.*, developer exactions, and in practices involving the purchase or transfer of development rights.¹⁴³ It is toward this theme of fiscal modes of land use control that the concluding articles of this volume are aimed.

The article, "Fiscal Impact Analysis as a Tool for Land Use Regulation,"¹⁴⁴ by Robert W. Burchell, Nathan Edelstein and David Listokin addresses itself to the question of the extent to which a municipality may legally regulate land use within its borders on the basis of the costs to the public resulting from such use. Although the question of whether a proposed development will be a net producer or net consumer of municipal revenues is obviously and realistically one of vital importance to municipal leaders, the article finds, rather surprisingly, that the issue is not directly addressed in most states' enabling acts and thus has been left to judicial interpretation, which, as described in the article, has varied from state to state. Brought into consideration are policies governing annexation; the matter of provision of public utilities, including the question of whether the costs thereof can be shifted to developers; and the judicial

¹⁴³ See article, "Farmland Preservation by Purchase of Development Rights: The Long Island Experiment," by Craig A. Peterson and Claire McCarthy, 26 DE PAUL L. REV. 447 (1977), reprinted at 9 LAND USE & ENVIRONMENT L. REV. 99 (1978).

¹⁴⁴ 7 REAL ESTATE L.J. 132 (1978), *infra* at 551. This article is based upon a chapter in the book, *The Fiscal Impact Handbook: Projecting the Local Costs and Revenues Related to Growth*, by Robert W. Burchell and David Listokin (Rutgers University Center for Urban Policy Research, 1978).

doctrines against exclusionary zoning prevailing in New York, New Jersey, Pennsylvania and other jurisdictions.

"The APA Act: Land Use Regulations and the Real Property Tax,"¹⁴⁵ by Ann Purdue, considers the effect which New York State's imposition of stringent land use controls, by its adoption of the Adirondack Park Land Use and Development Plan, has had upon the tax bases of local government units located within the park.¹⁴⁶ The article argues that where, as here, a state severely limits local development potential in an area of critical state concern, the state government has a duty to provide fiscal relief to property owners and affected municipalities so that the burden of the benefit conferred on the entire state is borne by all the state's taxpayers, and suggests several forms which this fiscal relief might take.

The equitable distribution of tax burdens and their effect on land use patterns is also the subject of the article, "Regulating Land Use While Taxing Tenants and Homeowners Equitably: An Alternative to the Real Property Tax System"¹⁴⁷ by Karen Lee McCleary. Although political patterns tend to preclude bringing about a change, it has long been recognized that federal personal income tax breaks given to homeowners but not to tenants are inequitable and regressive,¹⁴⁸ and have served as a factor promoting suburban sprawl, a situation which our energy-hungry country may likely come to regret.¹⁴⁹ In remedy of this inequity,¹⁵⁰ and also to refine local taxation as a tool for land use control,¹⁵¹ McCleary's article proposes and

¹⁴⁵ 42 ALBANY L. REV. 637 (1978), *infra* at 573.

¹⁴⁶ The Adirondack Park is a vast land area which, though largely state owned, includes within it considerable private land holdings and centers of population. See article "Preserving Scenic Areas: The Adirondack Land Use Program" 84 YALE L.J. 1705 (1975), reprinted at 7 ENVIRONMENT L. REV. 585 (1976).

¹⁴⁷ 27 AM. U. L. REV. 488 (1978), *infra* at 599.

¹⁴⁸ See article by Rochelle L. Stanfield in PLANNING (monthly magazine of the American Planning Association) for April, 1979, at p. 5, suggesting that the income gap between homeowners and renters is widening and that our federal tax law's preference for homeowners is contributing to the deterioration of the nation's rental housing stock.

In 1978, New York State enacted a law which would have attributed apartment building property taxes to tenants so as to permit them to claim a deduction for federal income tax purposes, but the plan was barred by the I.R.S., see N.Y. Times, 4/18/79. Bills to similar effect have been introduced without success in Congress.

¹⁴⁹ See generally, Part 4 of this volume.

¹⁵⁰ McCleary, *infra* at 601-15 traces how the cumulative effect of local and federal taxes falls more harshly on renters than on homeowners.

¹⁵¹ *Id.*, *infra* at 636-37, 645.

develops in considerable detail a land use tax, applicable to both tenants and homeowners in replacement of the current property tax system. Such a tax, calculated upon the basis of formulae set forth in the article, would permit taxation on a basis more accurately reflective of a taxpayer's contribution to the costs of municipal services¹⁵² while at the same time permitting more meaningful review by the courts for undue exclusionary effects.¹⁵³

¹⁵² *Id.*, *infra* at 616-19, 626-32.

¹⁵³ *Id.*, *infra* at 646-56.

Part 1

The Environmental Movement:
A Veteran's View

ENVIRONMENTAL DECISIONMAKING: JUDICIAL AND POLITICAL REVIEW†

DAVID SIVE*

SEVERAL YEARS AGO, at the time of the first explosion of environmental law, I went to the traditional fountains and fountainheads of administrative law, and attempted to answer the question: Is the scope of judicial review of environmental administrative action broader than, or different from, judicial review in other fields of administrative action?¹ The conclusion was, perhaps, an emotional one because the classical struggles to save various places—the Grand Canyon,² Storm King Mountain,³ Rainbow Bridge,⁴ and others—were just beginning. Environmental review really required something more than the usual look by courts at administrative action. I saw then that there were three grounds on which to base the need for expansive review. First, I thought that the value judgments which are so often required to resolve environmental cases called more for the talents and training of courts and judges than that of administrators.⁵ Second, the

† Reprinted by permission of the copyright owner from 28 Case Western Reserve Law Review 827 (1978).

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The author wishes to thank Clifford M. Wiener for his valuable assistance in the preparation of this article.

1. See Sive, *Foreword: Roles and Rules in Environmental Decisionmaking*, 62 IOWA L. REV. 637 (1977); Sive, *Some Thoughts of an Environmental Lawyer in the Wilderness of Administrative Law*, 70 COLUM. L. REV. 612 (1970).

2. See Hano, *The Battle of the Grand Canyon*, N.Y. Times, Dec. 12, 1965, § 6 (Magazine), at 56; *id.*, Dec. 19, 1965, § 1, at 57, col. 2; *id.*, May 2, 1966, at 42, col. 1.

3. See *Scenic Hudson Preservation Conference v. Federal Power Comm'n*, 354 F.2d 608 (2d Cir. 1965), *cert. denied sub nom. Consolidated Edison Co. v. Scenic Hudson Preservation Conference*, 384 U.S. 941 (1966).

4. See *Friends of the Earth v. Armstrong*, 485 F.2d 1 (10th Cir. 1973), *cert. denied*, 414 U.S. 1171 (1974).

5. See Sive, *Some Thoughts of an Environmental Lawyer in the Wilderness of Administrative Law*, 70 COLUM. L. REV. 612, 629–30 (1970).

very newness of some of the statutes which began to flood us at the end of the 1960's⁶ frequently generated classical questions of law to be reviewed *de novo* by the courts.⁷ Finally, the importance of the rights asserted, due to the irrevocable impact of environmental decisions, seemed to justify broader judicial review.⁸

The question whether environmental decisionmaking in general is different was one that we activists answered first emotionally, and later, rationally. We were led by people like Rachel Carson,⁹ David Brower,¹⁰ and hikers in the Hudson River highlands who importuned us to save the birds and other voices of spring from DDT, the Grand Canyon from dam builders, and Storm King Mountain from the Consolidated Edison Company. We viewed as heresy any claims that the fate of the environment must somehow be determined in the same manner as in other social movements—by the same kind of bargain-striking in the political process, and by application of the traditional notions of the scope of judicial review.

Several distinct events, both judicial and nonjudicial, suggest to me that the time is ripe to consider again whether environmental decisionmaking is different, or should be different, or is simply a movement some of us feel deeply about as others feel toward other equally important social movements.¹¹ About two years ago, in *Kleppe v. Sierra Club*,¹² the Supreme Court held that a governmental agency's determination to prepare an environmental impact statement in its presumed field of expertise must be upheld

6. *E.g.*, National Environmental Policy Act of 1969 (NEPA), 42 U.S.C. §§ 4321-4347 (1976).

7. *See* Sive, *supra* note 5, at 625-26, 630.

8. *Id.* at 643.

9. *See* R. CARSON, *SILENT SPRING* (1962).

10. Former Executive Director of the Sierra Club; *see* N.Y. Times, May 8, 1967, at 67, col. 1.

11. I have not been the only one, and hardly even one of the most important ones, to examine environmental decisionmaking in recent months. A vast outpouring of learning has come from a study by the Committee on Environmental Decisionmaking of the National Academy of Sciences, conducted as part of a multimillion dollar research project commissioned by the EPA. Decisionmaking in the Environmental Protection Agency (published by the National Academy of Sciences, 1977). The subject also proliferates in the law reviews and other learned literature. *See, e.g.*, Leventhal, *Environmental Decisionmaking and the Role of the Courts*, 122 U. PA. L. REV. 509 (1974); Smith, *The Environment and the Judiciary: A Need for Co-operation or Reform?*, 3 ENV'TL. AFF. 627 (1974); Symposium, *Environmental Decision-Making: The Agencies versus the Courts*, 7 NAT. RES. LAW. 337 (1974).

12. 427 U.S. 390 (1976).

unless its determination is arbitrary and capricious.¹³ Recently, in the Adirondack Mountains, where passions run high concerning New York State's first experience with land use controls,¹⁴ bumper stickers advise, "Are you hungry? Eat an environmentalist!" And, at both Seabrook, New Hampshire, and Kennedy Airport, New York, opponents of a nuclear power plant¹⁵ and of Concorde landings¹⁶ invoke the classical tenets of civil disobedience to supplement, or perhaps replace, the finely spun forensics and scholarship of their attorneys. These examples of current environmental activity on different levels serve to focus the attention of courts on the relationship of the adversary process to three other decisionmaking processes: 1) the administrative process,¹⁷ 2) the political process,¹⁸ and 3) the process of direct citizen action.¹⁹

At the outset of this address let me offer an answer to the question I have posed²⁰—Yes, environmental review is still broader, but less than it has been.

13. *Id.* at 412.

14. [I]n 1968, Governor Nelson A. Rockefeller created the Temporary Study Commission on the Future of the Adirondacks. In 1971, despite strong opposition from Park residents, New York State accepted the recommendations contained in the Report of the Commission by enacting the Adirondack Park Agency Act [N.Y. EXEC. LAW §§ 800–19 (McKinney Supp. 1978)].

The Act . . . represents a comprehensive and pioneering endeavor to provide land use planning for the Adirondack Park on a regional basis. Treating the region as a whole, the legislation is designed to provide a land use plan for the Park that will allow for the development and growth of local communities in a manner consistent with the protection and preservation of the entire region as a natural environmental resource.

Savage & Sierchio, *The Adirondack Park Agency Act: A Regional Land Use Plan Confronts "The Taking Issue,"* 40 ALB. L. REV. 447, 448 (1976). For a discussion of the background, substance, and operation of the Act, see Booth, *The Adirondack Park Agency Act: A Challenge in Regional Land Use Planning*, 43 GEO. WASH. U.L. REV. 612 (1975).

15. See N.Y. Times, May 1, 1977, § 1, at 26, col. 1; *id.*, May 2, 1977, at 1, col. 2; *id.*, May 3, 1977, at 20, col. 1. For a discussion of environmentalists, civil disobedience, and the law, see generally Sive, *Seabrook, Concorde and Law*, *id.*, July 16, 1977, at 21, col. 2.

16. See *id.*, April 17, 1977, § 1, at 19, col. 1; *id.*, April 18, 1977, at 54, col. 1; *id.*, May 16, 1977, at 57, col. 1; *id.*, Oct. 7, 1977, at 1, col. 1; *id.*, Nov. 21, 1977, at 40, col. 1.

17. See notes 20–41 *infra* and accompanying text.

18. See notes 42–63 *infra* and accompanying text.

19. See notes 64–65 *infra* and accompanying text.

20. With all due candor, I must qualify my claim of expertise: 1) I am a litigator and secondarily an observer; although I hope I am a fair observer, I may confuse what is with what ought to be; and 2) my legal expertise may be doubtful, for as in a war the infantry in the front lines always knows far less about who is winning than the quartermaster at command headquarters; so, too, one in the litigating trenches may know far less about the big picture than the scholars and commentators.

To begin with the latter half of that conclusion, there are three reasons why I think the difference has narrowed. One is that, with the passage of time and the maturing of environmental law, the proportion of important cases determined strictly by defining legal concepts, independent of findings of fact, has become smaller; that is, fewer important cases now hinge on the meaning of statutory phrases, such as "dike,"²¹ "navigable waters,"²² and "major federal actions significantly affecting the quality of the human environment."²³ It is also clear that a greater proportion of the cases are now determined upon issues of fact at trial rather than upon pretrial motions.²⁴ Included in these cases are the NEPA cases, which comprise a sizeable fraction of all environmental litigation. These cases more often now involve the sufficiency rather than the necessity of environmental impact statements.²⁵ Since determining the sufficiency of environmental impact statements often requires testimony of expert witnesses, submission of exhibits, and other evidentiary processes, courts are more commonly faced with issues of fact rather than law, and thus more of these cases proceed to trial.

Perhaps of greater significance is that, as time has gone on, the important cases being litigated have become evenly divided between those in which the environmental interests are seeking broader review and those in which their adversaries, to whom I refer as the "developmental interests," are seeking broader review. The situation is aptly described by Kenneth Boulding, one of our great economists and a National Academy of Sciences energy panelist, who once quipped to me that one of the things that makes environmental law interesting is the fact that the rich developmental interests have had the effrontery to use the tech-

21. *See, e.g.*, *Citizens Comm. for the Hudson Valley v. Volpe*, 425 F.2d 97, 106 (2d Cir.), (construing the Rivers and Harbors Appropriation Act of 1899, § 9, 33 U.S.C. § 401 (1970)), *cert. denied*, 400 U.S. 949 (1970).

22. *See, e.g.*, *Kalur v. Resor*, 335 F. Supp. 1, 10-11 (D.D.C. 1971) (construing the Rivers and Harbors Appropriation Act of 1899, § 13, 33 U.S.C. § 407 (1970)).

23. *See, e.g.*, *Smith v. City of Cookeville*, 381 F. Supp. 100, 109-11 (M.D. Tenn. 1974) (construing NEPA § 102(2)(C), 42 U.S.C. § 4332(2)(C) (1970)). *See generally* Comment, *Environmental Law: What is "Major" in "Major Federal Action?"*, Minnesota Pub. Interest Research Group v. Butz, 498 F.2d 1314 (8th Cir. 1974), 1975 WASH. U.L.Q. 485 (1975).

24. This conclusion is based on a comparison between the approximately 140 cases summarized in the 1971 volume of the Environmental Law Reporter and the approximately 180 cases summarized in the 1977 volume.

25. *E.g.*, *County of Suffolk v. Secretary of the Interior*, 562 F.2d 1368 (2d Cir. 1977), *cert. denied*, 98 S. Ct. 1238 (1978).

niques that they learned from the poor environmentalists.²⁶ The importance of this development is demonstrated very dramatically in the brief for the respondents²⁷ in *Vermont Yankee Nuclear Power Corp. v. Natural Resources Defense Council, Inc.*²⁸ Although the Supreme Court recently reversed the decision of the District of Columbia Court of Appeals, which had held that the Nuclear Regulatory Commission may not license nuclear power stations until it more fully considers the environmental effects of reprocessing and waste disposal, the framework of the Natural Resources Defense Council's (NRDC) argument is illustrative of the growing phenomenon in environmental cases. The environmentalists argued that the administrative action did not meet the standard of reasoned decisionmaking within the requirements of the Administrative Procedure Act and therefore should be overturned as arbitrary and capricious.²⁹ What authorities did the NRDC cite, however, to support its point that "The Law of Administrative Procedure Requires an Agency to Engage in Reasoned Decision-making?"³⁰ The NRDC cited eight environmental cases and five cases from other areas of administrative decisionmaking.³¹ Of the eight environmental cases, only two, *Scenic Hudson Preservation*

26. See also Hill, *Turning the Tables—Businesses Are Finding Environmental Laws Can Be Useful To Them*, Wall St. J., June 9, 1978, at 1, col. 6.

27. Brief for Respondents, *Vermont Yankee Nuclear Power Corp. v. Natural Resources Defense Council, Inc.*, 435 U.S. 519 (1978).

28. 435 U.S. 519 (1978), *rev'g* 547 F.2d 633 (D.C. Cir. 1976).

29. Section 10(e)(B)(1) of the Administrative Procedure Act, 5 U.S.C. § 706(2)(A) (1976), requires a reviewing court to set aside any action of an administrative agency that it finds to be "arbitrary, capricious, an abuse of discretion. . . ." In decisions spanning more than 30 years, the Supreme Court has construed § 10(e)(B)(1) to require a method of reasoned decisionmaking. See, e.g., *Citizens to Preserve Overton Park v. Volpe*, 401 U.S. 402 (1971); *Ethyl Corp. v. EPA*, 541 F.2d 1 (D.C. Cir.), *cert. denied*, 426 U.S. 941 (1976).

30. Brief for Respondents, *supra* note 27, at 29.

31. *Id.* at 30-32. The eight environmental cases are: *Citizens to Preserve Overton Park v. Volpe*, 401 U.S. 402 (1971); *American Petroleum Inst. v. EPA*, 540 F.2d 1023 (10th Cir. 1976); *Hooker Chem. Co. v. Train*, 537 F.2d 639 (2d Cir. 1976); *South Terminal Co. v. EPA*, 504 F.2d 646 (1st Cir. 1974); *Texas v. EPA*, 499 F.2d 289 (5th Cir. 1974); *Portland Cement Ass'n v. Ruckelshaus*, 486 F.2d 375 (D.C. Cir. 1973), *cert. denied*, 417 U.S. 921 (1974); *International Harvester Co. v. Ruckelshaus*, 478 F.2d 615 (D.C. Cir. 1973); *Scenic Hudson Preservation Conference v. Federal Power Comm'n*, 354 F.2d 608 (2d Cir. 1965), *cert. denied sub nom. Consolidated Edison Co. v. Scenic Hudson Preservation Conference*, 384 U.S. 941 (1966). The six cases from other administrative areas are: *Camp v. Pitts*, 411 U.S. 138 (1973); *Burlington Truck Lines, Inc. v. United States*, 371 U.S. 156 (1962); *SEC v. Chenery*, 318 U.S. 80 (1943); *Greater Boston TV v. FCC*, 444 F.2d 841 (D.C. Cir.), *cert. denied*, 403 U.S. 923 (1971); *Marine Space Enclosures, Inc. v. Federal Maritime Comm'n*, 420 F.2d 577 (D.C. Cir. 1969); *Isbrantsen Co. v. United States*, 96 F. Supp. 883 (S.D.N.Y. 1951).

*Conference v. Federal Power Commission*³² and *Citizens to Preserve Overton Park v. Volpe*,³³ are cases in which the environmental interests were seeking to expand the scope of review and to secure greater adversarial procedural rights at the administrative level. In six of the eight cases, the *developmental* interests were seeking the broader scope of review or greater adversarial rights, or both, and each involved review of EPA action. Of the six EPA cases cited by the NRDC, the most important is one of the first in which the environmentalists' shoe was put on the developmentalists' foot—*International Harvester v. Ruckelshaus*.³⁴ The reason why the cases are almost evenly divided now is simply that a tremendous amount of environmental litigation involves EPA determinations, and to the extent that the EPA is far more frequently pro-environment, because that is its mission, the people seeking to expand review and seeking greater adversarial rights are the developmental interests. Therefore, there is less difference than before between environmental review and other judicial review, since a disparity no longer exists between the number of cases in which those in favor of review, as opposed to their adversaries, are seeking its expansion.

Despite my prejudices, I believe that it has become evident that the EPA has grown in expertise. This development, which Professor Kenneth Culp Davis has quite correctly stated is the most important implicit factor defining the scope of court review,³⁵ is the third major factor which I think has narrowed the difference between the scope of environmental review and nonenvironmental review. In 1965, to speak to a Federal Power Commissioner about the subtleties of the beauty of Storm King Mountain, or to an Interior Department agent about the beauty of Rainbow Bridge, was a very difficult thing. Neither had the requi-

32. 354 F.2d 608 (2d Cir. 1965), *cert. denied sub nom.* Consolidated Edison Co. v. Scenic Hudson Preservation Conference, 384 U.S. 941 (1966).

33. 401 U.S. 402 (1971).

34. 478 F.2d 615, 640 (D.C. Cir. 1973). In *International Harvester*, the court set aside an order requiring new automobiles to be equipped with catalytic converters. Perhaps the first significant case in which the tables were turned is *National Helium Corp. v. Morton*, 326 F. Supp. 151 (D. Kan.), *aff'd*, 455 F.2d 650 (10th Cir. 1971), in which the National Helium Corporation complained that Secretary Morton improperly terminated a purchase contract without making an environmental impact statement in accordance with NEPA, § 102(2)(C), 42 U.S.C. § 4332(2)(C). *See also* *Natural Resources Defense Council, Inc. v. Nuclear Regulatory Comm'n*, 547 F.2d 633, 637 (D.C. Cir. 1976).

35. K. DAVIS, *ADMINISTRATIVE LAW TREATISE* § 30.09 (1958).

site expertise because such matters had never come before them. Those agencies do have expertise now, principally because a very large number of lawyers and other professionals who have been trained since the environmental movement began are now within those agencies.³⁶ The courts, I think, properly respect that expertise. A clear example is *Kleppe v. Sierra Club*,³⁷ in which the Supreme Court relied primarily upon the expertise of the Department of the Interior in sustaining its determination that a program environmental impact statement covering the effects of proposed coal mining was not necessary for the entire Northern Great Plains region.³⁸ The Court reasoned that the Department of the Interior was expert in dividing up the region for impact statement purposes—expert not only in the technical aspects of geography and geology, but also expert generally in considering all environmental factors. The Department of the Interior is certainly a good illustration of the change of outlook and growth of expertise since the mid 1960's.

Here of course one can argue that the Department acts with expertise when its decisions are liked and without it when its decisions are not liked. But it seems to me that if expertise is really the critical factor, the environmentalists may have an edge. The expert agency most frequently subject to review of environmental decisions is the EPA. To the extent that other agencies may not match the environmental expertise of the EPA, the environmentalists may have an advantage because the EPA was created to respond to environmental concerns.

For these three reasons, the difference between the scope of environmental review and nonenvironmental review has lessened. A difference still exists, however, and I think the best explanation for this was provided in the text of an address by Judge James L. Oakes, of the Second Circuit Court of Appeals:

The first such tentative conclusion, or, better, working hypothesis, is that, despite many links to the past, environmental law is in a real sense qualitatively different from other areas of administrative, regulatory, or public law. Because life itself is involved, there is no other area that I can think of that requires such a complex balancing of so many subtle relationships. An Interstate Commerce Commission (ICC) ratemaking decision,

36. This observation includes agencies such as the Army Corps of Engineers and the Federal Power Commission, or any other agencies which have formerly been classified as anti-environmental.

37. 427 U.S. 390 (1976).

38. *Id.* at 412-14.

a Federal Communications Commission (FCC) television licensing decision—these and similar regulatory decisions have several dimensions, but a relatively finite number. By contrast, the number of dimensions to many environmental questions is almost staggering. It is not enough to balance economic effects against human health effects, or the need for a structure against its unsightliness.³⁹

Judge Oakes continues with a comparison of the complexities,⁴⁰ and I suppose his conclusion is arguable. Some might make the same argument for decisions in other fields; for example, an FCC determination might involve the quality of public programs, civil rights, and other similar issues. I think I agree with Judge Oakes that environmental decisions differ because of their complexity, but I do not mean to say that they are more important. I will only go so far as to say that in this particular area there is a great importance which seems to arise out of the irrevocable nature of the decisions in environmental cases. I once suggested that in environmental cases more than in other fields, including the civil liberties field, the effect of a court's determination is more irrevocable⁴¹ than in a case in which, for example, a court makes a determination requiring some shade of opinion in the problems of the separation of church and state. I still believe that is true because a decision dealing with a problem of the latter type can be done or undone by a court which has moved to the left or right, or however courts move. But when a determination is made to appropriate a major physical resource, it virtually never can be undone, at least not within our lifetime or that of a few generations to follow.

This leads to the second aspect of our inquiry—the relationship of the judicial process to the political process. By the political process I mean the process by which legislation is enacted, the whole process of public debate of political issues, including the processes by which both state and federal legislators are elected. In my opinion, the most fascinating and also the most troublesome aspect of environmental decisionmaking lies here. I can liken its quality to some advice Professor James MacDonald, a witty friend of mine at the University of Wisconsin Law School, once gave me on identifying an appropriate topic for student discussion: "No problem is worth extended discussion unless it has no solution." By this criterion, the problems of the relationship

39. Oakes, *Substantive Judicial Review in Environmental Law*, 7 ENV'T L. REP. 50029, 50029 (1977).

40. *Id.* at 50033.

41. Sive, *supra* note 5, at 643.

between judge-made environmental law and politics are truly worthy of discussion. Here again I think the relationship is different in the environmental area than in other areas.

At the beginning of the environmental movement we thought that environmental decisionmaking was indeed so different in kind and importance that we romanticized our concepts of the relationship between man and nature into theories of a constitutional right to a clean and healthy environment.⁴² Such a right, we loosely argued, was one of those that James Madison and his fellow Federalists had deposited into the catchall known as the Ninth Amendment. Like the right of privacy, some of us theorized, it was within the constitutional "penumbra" of substantive due process announced in *Griswold v. Connecticut*.⁴³ For many reasons we did not find it necessary to take to the streets, to the fields, or to other avenues outside the legal process, in the manner of civil rights or peace advocates. I think the principal reason is that environmental causes were traditionally espoused by highly educated, white, upper-middle class persons, which is one of the burdens we bear today. We chuckled at the occasional tearing down, by nonlawyers, of billboards in the dead of night. Holding ourselves as being beyond all that, we went to the courts and the legislatures.

Today, by contrast, there are a large number of important controversies which are carried on in both the environmental litigating field and the political arena. The disputes involving nondegradation,⁴⁴ the Alaska Pipeline,⁴⁵ nuclear waste dispo-

42. See D. Roberts, *The Right to a Decent Environment: Progress Along a Constitutional Avenue* (a paper submitted to the Sept. 11-12, 1969 Conference on Law and the Environment, sponsored by the Conservation Foundation, Washington, D.C.) [hereinafter cited as the "Warrenton Conference"]. It was probably here that the term "environmental law" was invented.

43. 381 U.S. 479, 483-84 (1965); see Roberts, *supra* note 42. Not only has there been a push for recognition that a clean environment is constitutionally guaranteed, but also some have argued that natural objects should be given standing to sue to protect their survival. Stone, *Should Trees Have Standing?—Toward Legal Rights for Natural Objects*, 45 S. CAL. L. REV. 450 (1972). In *Sierra Club v. Morton*, 405 U.S. 727, 741-53 (1972), Justice Douglas argued that Mineral King Valley should have been the plaintiff in the suit to simplify confusion surrounding the standing issue in environmental cases. Justice Douglas likened such conferral of standing to the recognition of legal status to other inanimate objects such as ships and corporations. *Id.* at 741-42.

44. Hines, *A Decade of Nondegradation Policy in Congress and the Courts: The Erratic Pursuit of Clear Air and Clean Water*, 62 IOWA L. REV. 643 (1977).

45. See generally Dominick & Brody, *The Alaska Pipeline: Wilderness Society v. Morton and the Trans-Alaska Pipeline Authorization Act*, 23 AM. U.L. REV. 337 (1973).

sal,⁴⁶ transportation control plans,⁴⁷ and clearcutting⁴⁸ provide only a few examples. One of the major problems that arises from having both the political process and the legal process work on the same matters at the same time is the frequency of inconsistent and reversible decisions.

About twelve years ago I was involved in such a situation, when I experienced losing in court but winning the larger war. The war was a relatively minor one—just the desire of park associations, environmentalists, and certain storeowners in the area, including the Atlantic Chapter of the Sierra Club and Tiffany's, to prevent the construction of a cafe at the southeast corner of Central Park in Manhattan.⁴⁹ After four years of litigation, on issues including the definition of a "park,"⁵⁰ and the public trust question,⁵¹ the environmentalists lost in New York's highest court. However, Tom Hoving, then recently appointed by Mayor Lindsay as Parks Commissioner and the son of one of the plaintiff storeowners, vetoed the plans for the cafe. Conversely, I suppose the biggest battle the environmentalists won in the courts and then lost in politics was the much more important one involving the Alaska Pipeline.⁵² First, Congress nullified the injunction order of the court of appeals⁵³ by legalizing a wider corridor for the pipe-

46. *See, e.g.*, *West Va. Div. of the Izaak Walton League of America, Inc. v. Butz*, 522 F.2d 945 (4th Cir. 1975); *Texas Comm. on Natural Resources v. Bergland*, 433 F. Supp. 1235 (E.D. Tex. 1977). *See generally* STAFF OF SUBCOMM. ON PUB. LANDS OF THE SENATE COMM. ON INTERIOR AND INSULAR AFFAIRS, 92D CONG., 2D SESS., CLEARCUTTING ON FEDERAL TIMBERLANDS (Comm. Print 1972); *Hearings on Establishment of a Comm'n to Investigate Clearcutting of Timber on Pub. Lands Before the Subcomm. on Forests of the House Comm. on Agriculture*, 92d Cong., 2d Sess. (1972).

47. *See* *District of Columbia v. Train*, 521 F.2d 971 (D.C. Cir. 1975); *Clean Air Act* § 110, 42 U.S.C. § 1857c-5 (1976).

48. *See, e.g.*, *Natural Resources Defense Council, Inc. v. Nuclear Regulatory Comm'n*, 547 F.2d 633 (D.C. Cir. 1976).

49. *795 Fifth Ave. Corp. v. City of New York*, 11 N.Y.2d 918, 183 N.E.2d 77, 228 N.Y.S.2d 672 (1962).

50. *See* *795 Fifth Ave. Corp. v. City of New York*, 40 Misc. 2d 183, 193, 242 N.Y.S.2d 961, 971 (1963), *aff'd*, 15 N.Y.2d 221, 205 N.E.2d 850, 257 N.Y.S.2d 921 (1965).

51. *Id.* at 186-94, 242 N.Y.S.2d 964-72. *See also* *795 Fifth Ave. Corp. v. City of New York*, 13 App. Div. 2d 733, 733-34, 215 N.Y.S.2d 391, 392 (1961). The public trust issue focuses on whether a government may alienate trust property by conveying it to a private owner and whether the government may effect changes in the use to which that property has been devoted. *See generally* Sax, *The Public Trust Doctrine in Natural Resource Law: Effective Judicial Intervention*, 68 MICH. L. REV. 473 (1970).

52. *See generally* Dominick & Brody, *supra* note 45.

53. *Wilderness Soc'y v. Morton*, 479 F.2d 842 (D.C. Cir.), *cert. denied*, 411 U.S. 917 (1973).

line.⁵⁴ Then, by the tie-breaking vote of Vice President Agnew, the Senate rendered unnecessary the court's determination of whether the environmental impact statement was insufficient by passing the enabling act for the pipeline.⁵⁵

I suppose what injects controversy into the political process is that it involves the interests of a large number of people. Despite the frequency with which environmental controversies are involved in the political process, the fact that they involve such widely held interests may render them more worthy of judicial determination than those controversies involving only a small, discrete number of interested persons.

Environmental decisionmaking, therefore, raises another problem related to the political process: the overloading of the federal courts with too many of our social and economic problems. This recalls de Tocqueville, who first observed that we ultimately bring everything to the courts seeking resolution.⁵⁶ Chief Justice Burger has frequently commented on the problem,⁵⁷ but I am afraid I have no solution to offer him. To some extent I share his viewpoint that we must use means other than courts for certain types of dispute resolution; for example, the issue whether a girl as well as a boy should be able to play shortstop.⁵⁸ On the other hand, it is we environmental advocates who have expanded standing and judicial cognizance of noneconomic rights⁵⁹ and have thus supplied the law and form books to the Little League

54. Federal Lands Right-of-Way Act of 1973, Pub. L. No. 93-153, 87 Stat. 576 (1973) (codified at 30 U.S.C. § 185 (Supp. V 1975)).

55. Trans-Alaska Pipeline Authorization Act, Pub. L. No. 93-153, 87 Stat. 584-90 (1973) (codified at 43 U.S.C. §§ 1651-1655 (Supp. V 1975)).

56. A. DE TOCQUEVILLE, *I DEMOCRACY IN AMERICA* 290 (Bradley ed. 1954).

57. See, e.g., *Chief Justice's Yearend Report, 1977*, 64 A.B.A.J. 211 (1978); *Chief Justice Burger's 1977 Report to the American Bar Association*, 63 *id.* 504 (1977); *The Direction of the Administration of Justice*, 62 *id.* 727 (1976); *Annual Report on the State of the Judiciary*, *id.* at 443; *Chief Justice Burger Issues Yearend Report*, *id.* at 189; *The State of the Judiciary—1975*, 61 *id.* 439 (1975); *Chief Justice Burger Calls for Action on Several Proposals*, *id.* at 303.

58. See *Fortin v. Darlington Little League*, 514 F.2d 344 (1st Cir. 1975); *Magill v. Avonworth Baseball Conference*, 364 F. Supp. 1212 (W.D. Pa. 1973), *vacated*, 497 F.2d 921 (3rd Cir. 1974); *Rappaport v. Little League Baseball, Inc.*, 65 F.R.D. 545 (D. Del. 1975).

59. *West Va. Highlands Conservancy v. Island Creek Coal Co.*, 441 F.2d 232 (4th Cir. 1971); *Scenic Hudson Preservation Conference v. Federal Power Comm'n*, 354 F.2d 608 (2d Cir. 1965), *cert. denied sub nom. Consolidated Edison Co. v. Scenic Hudson Preservation Conference*, 384 U.S. 941 (1966); *Citizens Comm. for the Hudson Valley v. Volpe*, 302 F. Supp. 1083 (S.D.N.Y. 1969); *Road Review League v. Boyd*, 270 F. Supp. 650 (S.D.N.Y. 1967).

litigants. I will confess that perhaps my view is a little provincial, in that the father may claim that his interest in protecting his daughter's right to play shortstop is just as important as an interest of mine in gazing at a scenic mountain without a microwave tower on top of it. The only opinion that I have enough confidence to state about this problem is that if something should be done about it, the proper solution is neither to narrow judicial review or rights of standing, nor is it to discriminate against the cases in which tremendous numbers of people have perhaps a small interest, as in *United States v. SCRAP*.⁶⁰ Let there be an informed and enlightened judgment, recognizing that some of the newer environmental values are equally important as some of the traditional economic values. Let us not fall back into pre-*Baker v. Carr*⁶¹ concepts of political questions and get lost in what is a "case or controversy."⁶²

All of this goes without even mentioning many of the ethical problems for attorneys, problems of the use of the court system solely to gain publicity and thereby influence legislation and the use of abusive discovery tactics in order to effect delay. This type of politicization perhaps arises out of the inherent drama and public attention given to court cases. These problems have been adequately discussed elsewhere.⁶³

Finally, I address the third aspect of environmental decision-making which I have mentioned; namely, the relationship of the courts to direct citizen action—or what we call "self-help" in torts and "civil disobedience" in political science. Again, the question is

60. 412 U.S. 669 (1973). In *SCRAP* the United States Supreme Court held that various environmental groups, including Students Challenging Regulatory Agency Procedures (SCRAP) and the Environmental Defense Fund, were persons "aggrieved" within the meaning of § 10 of the Administrative Procedure Act, 5 U.S.C. § 702 (1970), and therefore they had standing to sue. 412 U.S. at 683-90.

61. 369 U.S. 186 (1962). This case recognized that the mere fact that a suit seeks protection of a political right does not mean that it presents a nonjusticiable "political question." The Court thus explained the lower court's misguided reliance on *Colegrove v. Green*, 328 U.S. 549, and "subsequent *per curiam* cases." 369 U.S. 186, 208-09 & n.29 (1962).

62. U.S. CONST. art. III, § 2. See L. JAFFE & L. TRIBE, ENVIRONMENTAL PROTECTION (1971) (where the authors ask the reader to consider: "One of the problems raised by this section on Judicial Review is whether Sive's emphasis on the potential of judicial review is sound. Keep this in mind." *Id.* at 619); Sive, *supra* note 5, at 650-51.

63. For a discussion where the author feels there are no ethical dilemmas, see Like, *Multi-Media Confrontation—The Environmentalists' Strategy for a "No-Win" Proceeding*, 13 *ATOM. ENERGY L.J.* 1 (1971); 1 *ECOLOGY L.Q.* 495 (1971). *Contra*, Sive, *supra* note 5, at 617-19; D. Sive, *Securing, Examining, and Cross Examining Expert Witnesses in Environmental Cases* (a paper submitted to the "Warrenton Conference," *supra* note 42). See generally, ABA CODE OF PROFESSIONAL RESPONSIBILITY DR 1-102(A)(5), EC 7-28, DR 7-101(A),(B) (1975).

whether the relationship of the two processes in the environmental area is different from that in other areas. While thinking about the recent demonstrations at Kennedy Airport concerning the Concorde, and the seizure of a nuclear plant at Seabrook, New Hampshire,⁶⁴ I have asked myself why environmentalists don't do what civil rights advocates, women's rights partisans, and gay activists do to dramatize or enforce their claims, including some of the things which are—perish the thought—illegal? One can well contemplate how much poorer America would be if Thoreau, on the afternoon before the evening that he spent in jail, had consulted and heeded the probable advice of a tax expert of one of Boston's great law firms. And how much poorer we would be if Martin Luther King, Jr. had heeded the trespass sections of the Restatement of the Law of Torts instead of staying beyond his allowed time at the Jackson, Mississippi, lunch counters!

Certainly we environmentalists believe that our laws are highly moral. One problem, it seems, is that in many cases we are not in a position to assert our view by positive action. The civil rights protesters can often assert their rights by simply exercising what they believe to be their privilege; for example, attending schools from which they have been excluded or refusing to move to the back of a bus. Environmentalists, on the other hand, cannot depollute a stream or mass-produce emission control devices. Ironically, it seems that the developmentalists are the ones who are best able to directly demonstrate for their rights, by heedlessly going forward with their projects.⁶⁵

Second, I think that the environmental movement, more than any other social movement in my adult lifetime, has been born and bred in the courts. An overwhelming portion of all environmental law is not only made in the courts but in suits instituted by national environmental corporate law firms—the Sierra Club, the Legal Defense Fund, the Environmental Defense Fund, and the Natural Resources Defense Council—whose principal function is litigation.

Furthermore, lawyers who are involved in the litigating process generally believe in the rule of law, even if it is only because of a simple need to defend their usefulness. Although such a strict

64. See notes 15–16 *supra* and accompanying text.

65. For a discussion of the economic consequences of this fact, see Junger, *A Recipe for Bad Water: Welfare Economics and Nuisance Law Mixed Well*, 27 CASE W. RES. L. REV. 3, 224–27 (1976).

belief in legal principle may reflect a very real professional provincialism, I think that it would threaten lawyers' credibility and perhaps the hard-won standing of their environmental clients, if they turned to supporting civil disobedience when they lose and proclaiming the rule of law when they win.

This may seem like a renunciation of the godfather of environmentalists, Thoreau. Another good environmentalist, Walt Whitman,⁶⁶ and a well-known authority in other diverse areas of social policy, William Shakespeare, both said that we would be better off without lawyers.⁶⁷ I do not believe it to be such a renunciation. Thoreau was not a trustee of the Environmental Defense Fund; he cherished and kept pollution-free his Walden Pond without declaratory judgment or mandamus actions. Nor am I saying to the midnight feller of billboards that he must either stop or sue in the daytime. I do not have the expertise to make such a judgment, but rather, as one of a group of litigating lawyers who owe so much to the integrity of the process which they have used to great advantage, and who owe to it a certain gracious acceptance when they lose, I refer to sociologists and clergymen the emerging question of the relationship of environmental adjudication to the non-legal process of civil disobedience.

And so, to the question whether environmental decisionmaking is still different, my answer is yes, it is different, because of a variety of interrelationships with the judicial administrative process, the political process, and direct citizen action. The difference in the qualitative character of judicial review of environmental decisionmaking still stems from three aspects:

(1) The value judgments present in so many environmental cases "call more for the talents and training of the courts and judges than for those of the . . . administrators"; (2) the relative youth of environmental law and the consequent necessity to define new terms and concepts and to redefine old ones justify greater judicial participation; and (3) the importance of the rights asserted in environmental cases, arising out of the irrevocable impact of environmental decisions, justifi[es] "more thoroughgoing judicial review."⁶⁸

66. WHITMAN, *The Eighteenth Presidency*, in FURNESS, WALT WHITMAN'S WORKSHOP 92-95, 99 (1928).

67. W. SHAKESPEARE, KING HENRY VI, Pt. 2, Act 4, Sc. 2, Lines 83-84 (statement of character Jack Cade).

68. Sive, *Foreword: Roles and Rules in Environmental Decisionmaking*, 62 IOWA L. REV. 637, 637 (1977) (footnotes omitted).

The differences have narrowed, however, for three reasons. First, the proportion of important cases determined strictly by defining legal concepts, independent of findings of fact, has become smaller. Second, the important litigated cases have now become evenly divided between those in which the environmental interests are seeking broader review, and those in which their adversaries, the developmental interests, are seeking broader review. And third, the federal agencies have grown in relative expertise in making environmental decisions. With regard to the political process, the differences arise from the large numbers of people involved, and the corresponding frequency with which complex environmental controversies which appear in the courts are also subject to political decisions that may negate the judicial decisions. Finally, the utility of civil disobedience to environmentalists seems to be less than in other social movements because their legal arm may not, without adversely affecting its credibility, simultaneously support judicial decisions which have favored environmentalists and fight those which have gone against them.

Part 2

The First Decade: The Environmental Impact Statement Reconsidered

NEPA'S EFFECT ON THE CONSIDERATION OF ALTERNATIVES: A CRUCIAL TEST†

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INTRODUCTION

Since the enactment of the National Environmental Policy Act of 1969¹ much attention has been focused on the Act's more obvious effects: the preparation of environmental statements and the litigation surrounding alleged failures of agencies to prepare such statements where required or to prepare fully adequate statements. This litigation has resulted in greater compliance with NEPA, in the sense that environmental statements are generally being prepared where required and the quality of the average statement has improved. However, there is some question as to whether the activity associated with the preparation and review of environmental statements has led to changes in agency planning and decision making that are consistent with the spirit as well as the letter of the Act. Ingram has articulated this question of the long term effectiveness of NEPA concisely. She notes in reference to the large number of court cases that environmental organizations have won under NEPA that, "There is a considerable difference . . . between sand in the wheels of progress on specific projects and actually altering the patterns of communications in decision making."²

It was this question of NEPA's long term effectiveness which led us to investigate its influence on federal water resources planning and decision making. Specifically, this investigation entailed an examination of NEPA's effects and effectiveness in two federal water resources planning programs: the small watershed program of the U.S.

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1. National Environmental Policy Act of 1969, 42 U.S.C. § 4321, *et seq.* (1970).

2. H. Ingram, *Information Channels and Environmental Decision Making*, 13 NAT. RES. J. 150, 162 (1973).

Department of Agriculture's Soil Conservation Service (SCS) and the survey investigation program (preauthorization studies) of the U.S. Army Corps of Engineers (Corps).³ This paper presents some of the results from that portion of the investigation dealing with NEPA's influence on the formulation and evaluation of alternatives. These results are based on data obtained from questionnaire surveys mailed in 1974 to all Corps District offices and SCS State Offices.

The part of NEPA that focuses most directly on alternatives is Section 102(2)(C)(iii) of NEPA, which requires that every environmental statement contain information on "alternatives to the proposed action." This discussion of alternatives, generally recognized as one of the key elements of an environmental statement, has been identified as the one area in which environmental statements are typically most deficient.⁴ This paper does not concentrate on the environmental statement, *per se*. Rather, it goes beyond the environmental statement by examining whether NEPA has affected the formulation and evaluation of alternatives during the various stages of the planning and decision making processes in Corps and SCS water resources planning programs.

We believe that NEPA's effect on the consideration of alternatives represents one of the single best measures of NEPA's effectiveness in achieving the policy objectives articulated in Section 101 of NEPA. The premises that lead us to this position are as follows: (1) The legislative intent reflected in NEPA is that agencies be required to take account of environmental, economic, and technical considerations in all phases of planning and decision making. (2) If NEPA is to be effective in the long run, fundamental changes must be made in agencies' planning and decision making processes. That is, NEPA's intent can not be achieved by environmental analyses "tacked on" to planning processes used prior to NEPA's passage; (3) The consideration of a wide range of alternatives is central to "good" planning.⁵ From these premises it follows that in order for environmental considerations to be fully integrated into planning and de-

3. For a full report of this research, see W. Hill, *The National Environmental Policy Act and Federal Water Resources Planning: Effects and Effectiveness in the Corps and S.C.S.*, Report IPM-4, Dep't of Civil Engineering, Stanford University (Dec. 1977).

4. See, e.g., *National Environmental Policy Act Oversight: Hearings Before the Subcomm. on Fisheries and Wildlife Conservation and the Environment of the House Comm. on Merchant Marine and Fisheries*, 94th Cong., 1st Sess. (1975) (statement of Bruce Terris, Esq., at 172).

5. Cf. M. Wolman, *Selecting Alternatives in Water Resources Planning and the Politics of Agendas*, 16 NAT. RES. J. 773 (1976). Wolman is generally critical of engineering and planning discussions of the enumeration of alternatives which have "minimized the significance of social or ideological conflicts." *Id.* at 774. Utilizing the literature of political

cision making, and to thereby satisfy the intent of NEPA, the opportunity must exist for environmental considerations to influence both the selection of the alternatives to be considered (formulation) and the selection of the plan which is ultimately recommended for implementation (evaluation or plan ranking).

In the section immediately below we look to the language of NEPA, the Council on Environmental Quality (CEQ) guidelines⁶ and the Corps and SCS procedures implementing these in order to identify specific requirements regarding the consideration of alternatives. The requirements are then examined in the context of the assumptions outlined above to arrive at specific criteria by which NEPA's effectiveness, vis-a-vis the consideration of alternatives, can be measured. That is, how might NEPA be expected to bring environmental considerations into the formulation and evaluation of alternatives in water resources planning in the Corps and SCS and what one might expect to observe if in fact NEPA is accomplishing this end? In the remainder of the paper the results of the questionnaire surveys administered to the Corps and SCS are examined to see how well they performed with respect to the measures of effectiveness.

TOWARD MEASURES OF EFFECTIVENESS: NEPA, CEQ AND AGENCY REQUIREMENTS

The NEPA requirement that information on alternatives to the proposed action be included in every environmental statement was noted above. A stronger mandate in regard to alternatives is contained in Section 102(2)(D). This section requires that all federal agencies "study, develop, and describe appropriate alternatives to recommended courses of action in any proposal which involves unresolved conflicts concerning alternative uses of available resources."⁷

The CEQ guidelines contain detailed requirements as to what should be included in an environmental statement regarding alterna-

science dealing with agenda building, Wolman argues that, "[T]he agenda of alternatives to be considered is not only fundamental to the democratic process but access to the agenda, rather than being simply an intellectual exercise and a pro-forma act of the planning process, represents in reality the politics of influencing or controlling the outcome of a contest or decision." *Id.* at 774-75. This supports the central argument of this paper, that NEPA's influence on the consideration of alternatives represents an excellent measure of NEPA's effectiveness in getting environmental considerations integrated into planning and decision making.

6. Council on Environmental Quality, Preparation of Environmental Impact Statements: Guidelines, 38 Fed. Reg. 20550 (1973) [hereinafter cited as CEQ guidelines].

7. National Environmental Protection Act of 1969, § 102, 42 U.S.C. § 4332(2)(E) (Supp. V 1975).

tives which reflect the language of NEPA and, to a large extent, the decisions handed down by the courts in NEPA litigation. The CEQ guidelines require that the environmental statement include information on "[a]lternatives to the proposed action, including, where relevant, *those not within the existing authority of the responsible agency* [emphasis supplied]."⁸ Further, "[a] rigorous exploration and objective evaluation of the environmental impacts of all reasonable alternative actions, particularly those that might enhance environmental quality or avoid some or all of the adverse environmental effects, is essential."⁹

This section of the guidelines continues with examples of alternatives that should be included. CEQ lists the following types of alternatives: (1) the "no action" alternative; (2) "alternatives requiring actions of a significantly different nature which would provide similar benefits with different environmental impacts [e.g., 'non-structural alternatives to flood control programs'];" (3) "alternatives related to different designs or details of the proposed action which would present different environmental impacts" (referred to herein as project modifications); and (4) "alternative measures to provide for compensation of fish and wildlife losses, including the acquisition of land, waters, and interests therein" (referred to herein as mitigation).¹⁰

On the subject of alternatives the CEQ guidelines do more than indicate the types of alternatives to be discussed in an environmental statement. They call for the use of the "environmental impact statement process to explore alternative actions that will avoid or minimize adverse impacts."¹¹ The discussion in the environmental statement per se is intended to reveal the results of this exploration by reflecting "the agency's comparative evaluation of the environmental benefits, costs and risks of the proposed action and each reasonable alternative."¹²

8. CEQ guidelines, *supra* note 6, at § 1500.8(a)(4) (emphasis added).

9. *Id.*

10. *Id.* (emphasis added). Note that while this list is useful in framing some of the possible types of alternatives, items (3) and (4) present some difficulty in interpretation. For example, should a dam with a fish ladder (mitigation measure) be considered an alternative to the identical dam without the fish ladder? Should a fourteen mile channelization project be considered an alternative to sixteen miles of channelization? Our feeling is that such mitigation measures and minor project modifications should not be considered alternatives in the same sense as "no action," nonstructural alternatives and major project modifications. This problem of defining what constitutes a "real alternative" has not, to our knowledge, been dealt with in the literature. Questions of interpretation raised by this lack of precise definition are taken up below with some of the analyses of data.

11. *Id.* at § 1500.2(b)(3).

12. *Id.* at § 1500.8(a)(4).

There is one other provision of the CEQ guidelines that is especially noteworthy in the context of alternatives: a call for interdisciplinary planning, which reflects the Section 102(2)(A) requirement that agencies "utilize a systematic interdisciplinary approach which will insure the integrated use of the natural and social sciences and the environmental design arts in planning and decision making which may have an impact on man's environment."¹³ The connection between the Section 102(2)(A) requirement and the consideration of alternatives is clearly recognized by the CEQ guidelines: "The interdisciplinary approach should not be limited to the preparation of the environmental statement, but should also be used in the early planning stages of the proposed action. Early application of such an approach should help assure a *systematic evaluation of reasonable alternative courses of action* and their potential social, economic, and environmental consequences [emphasis supplied]."¹⁴

NEPA procedures issued by the Corps¹⁵ and SCS¹⁶ fully reflect CEQ guideline requirements concerning the consideration of alternatives. Corps and SCS NEPA procedures elaborate on the CEQ guidelines by providing lists of specific types of actions that should always be considered during the course of planning. It is noteworthy that both agencies' procedures give special emphasis to the consideration of nonstructural alternatives and the "no project" or "no action" alternative.

Based on CEQ and agency requirements and the promises delineated in the previous section, we can formulate criteria for evaluating the effectiveness of NEPA in influencing the consideration given to alternatives in planning and decision making in the Corps and SCS. These criteria, or measures of effectiveness, are changes which one might be expected to observe if NEPA has affected the consideration of alternatives by the agencies. Changes reflecting the degree of consideration are: (1) the range of alternatives receiving serious consideration—specifically, nonstructural alternatives, alternatives outside the authority of the agencies to implement, and the "no

13. *Supra* note 7, at § 4332(2)(A).

14. CEQ guidelines, *supra* note 6, at § 1500.8(c) (emphasis added).

15. U.S. Army Corps of Engineers, Engineer Regulation 1105-2-507, Planning: Preparation and Coordination of Environmental Statements, 39 Fed. Reg. 12737 (1974) [hereinafter cited as Corps NEPA Procedures].

16. U.S. Dep't of Agriculture, Soil Conservation Service, Environmental Impact Statements: Guidelines for Preparation, 39 Fed. Reg. 19646 (1974) [hereinafter cited as SCS NEPA Procedures]. Note that while these SCS NEPA Procedures were not formally in effect at the time of our survey, interim procedures containing essentially the same language regarding alternatives had been transmitted to the field level offices.

project” alternative;¹⁷ (2) the effect of environmental impact assessment in the formulation and evaluation of alternatives; and (3) the influence of Corps and SCS environmental resources (ER) personnel in the consideration of alternatives. In the remainder of this paper we elaborate further on these three measures of effectiveness and examine them in terms of Corps and SCS planning efforts which were underway at the time of our questionnaire surveys—Spring 1974.

RESEARCH APPROACH

Questionnaire Surveys

Our surveys consisted of three different questionnaire forms mailed to each of the field offices of the Corps and SCS, i.e., Corps Districts and SCS State Offices.¹⁸ Form A, which was to be completed by the Chief of Planning in each Corps District and the Assistant State Conservationist for Watersheds in each SCS State Office, was designed primarily to produce “overview” data regarding NEPA-related activities and the scope of pre-authorization planning and watershed planning, respectively. Only a few of the results discussed in this paper were derived from questions included on this form.

Forms B and C were slightly longer, nearly identical questionnaires which were to be completed by field level personnel actively involved in planning. In the Corps, Form B was to be completed by a study manager/project engineer and Form C was to be completed by someone in the environmental resources (ER) branch or section. In both cases it was requested that the respondent be someone involved in an ongoing survey investigation begun “in the last two to five years.” In SCS, Form B was to be completed by the head of the watershed planning party or a member of his staff and Form C was to be completed by the State Resource Conservationist or “someone else not on the watershed planning staff who has been involved in watershed planning to some extent during the past few years. (Preferably a non-engineer).” Forms B and C were slightly different, but each contained many questions in common. The format and wording of the Corps and SCS questionnaires were as nearly identical as possible.

17. What we are interested in measuring here is whether the range of alternatives being considered has been expanded to include other than the “usual” set of structural alternatives. Thus, the other types of alternatives listed by CEQ and noted above (namely, project modifications and mitigation measures) are not of concern here.

18. The design and pretesting of these questionnaires is described in detail in W. Hill & L. Ortolano, NEPA’s Influence on Federal Water Planning: Part 1, Effect of the “Review and Comment Process” on Water Resources Planning in the Corps of Engineers and Soil Conservation Service (Sept. 1975) (EEP-Report No. 52, Dept. of Civil Eng., Stanford Univ.); and in W. Hill, *supra* note 3.

The SCS questionnaires were mailed out in February 1974 and the Corps questionnaires followed a month later. SCS returned a total of 139 completed questionnaires (99 percent response rate) while 103 were returned from the Corps (93 percent response rate). The overall response rate of 96 percent, while certainly owing much to transmittal letters supplied by the Corps and SCS Washington offices, also attests to the high level of interest in this research topic among field level planners in the two agencies.

"Plan Specific" Questions

Each of the Form B and Form C questionnaires included a section in which the respondent was asked to answer all questions "with reference to a specific survey scope investigation [or, for SCS, a Public Law 566 project]¹⁹ with which you have been actively involved." It was requested that this planning study preferably be one begun in the last two to five years (for SCS, "one authorized for planning in the last three years").²⁰ The main selection criterion, however, was that the respondent had been actively involved in the planning. This "plan-specific" section of the questionnaires contained over 30 questions, approximately a third of which dealt with the consideration of alternatives. While these plan-specific questions are vulnerable to the criticism that respondents may have tended to refer to their best planning efforts, this is not felt to be a significant problem. Using the selection criteria noted above, the pool of available planning studies from which a respondent could pick a best effort was generally not very large.

The need to include plan-specific questions became apparent in the course of the preliminary interviews conducted during the design and pre-testing of the questionnaires. When a Corps or SCS planner was asked a question in general terms, the usual response included a recitation of the official guidance on the subject. However, when the same question was asked in the context of a particular study, the response was much more specific and often times significantly different from the official guidance. For example, when asked what alternatives were being considered in planning, the field level planner would typically respond with the categorical list of alternatives which his or her agency guidelines said were to be considered, e.g.,

19. Public Law 566 project is an analogous term for small watersheds project. It derives from the Act authorizing the program: Pub. L. No. 83-566 as amended, Watershed Protection and Flood Prevention Act, 16 U.S.C. §§ 1001-1008 (1970).

20. Hereinafter questions quoted from the surveys will give the wording used in the Corps questionnaire with word changes appropriate to SCS noted in parentheses.

the "no project" alternative, flood plain zoning, etc. While such responses established that these planners were cognizant of their field level guidance, they established little else. When more probing questions were asked of these planners concerning alternatives considered in a specific planning study, we often found that many of these alternatives had not been seriously considered in that particular study. More often, there had been one principal structural alternative under consideration from the outset and other alternatives had been given limited consideration much later in the planning process or, in some instances, had been considered only in the preparation of the environmental statement. Most planners were quick to point out that this was the way it was before NEPA; things were different now. Nevertheless, these interviews prompted us to include a plan-specific section in the Form B and Form C questionnaires; they also prompted us to use plan-specific questions to examine the seriousness with which alternatives were in fact being considered in the agencies' planning processes.

The Corps sample for the plan-specific questions includes 34 Form B responses and 35 Form C responses for a total sample size of 69. For SCS there were 46 responses for each of the two questionnaire forms for a total sample size of 92. Note, however, that the number of different studies or projects in the sample is somewhat less than the total number of respondents. This is because some of the respondents from the same Corps District or SCS State Office elected to refer to the same study. The data presented below have not been corrected for this duplication because they represent (often differing) perceptions of individual respondents.

Also note that the number of usable responses (N) reported in the analyses below is always slightly less than the sample sizes given above. One reason for this is that not every respondent answered every question. Another reason for the varying N's for different questions stems from the selection criteria for the plan-specific questions, as explained below.

Planning Studies in Different Stages of Completion

One consequence of asking respondents to answer questions with reference to planning studies in which they had been actively involved is that the data refer to studies in all stages of planning, from those just beginning to those essentially completed. For example, 18 percent of the planning studies referred to by Corps respondents had been essentially completed at the time of our survey (i.e., a plan had been presented at a final public hearing); and 5 percent of the Corps

studies were in the earliest stages of planning (i.e., they were not yet past the point at which a "Phase I study report" had been submitted).²¹ Forty percent of the studies referred to by SCS respondents were essentially completed (i.e., they were in the final review process or approved for "Operations"); and two percent were in the earliest (i.e., "Preliminary Investigation") stage of planning.²²

The fact that our sample includes studies in various stages of completion does not prevent any particular problems in the analysis of the data.²³ The only result of having studies in various stages of completion is that the usable sample size varies for different questions. The reason for this is that those cases where a question could not be answered because the planning was not sufficiently far along or, conversely, because it was too far along, were treated as "missing cases." That is, the response to the particular question was coded as "not applicable" and eliminated from the usable sample. As explained below, an additional technique was employed in the analysis of the consideration given nonstructural alternatives. Since this analysis involved responses to four different questions, a screening criteria was used to eliminate all studies in the early stages of planning and thus to maintain a uniform sample size for the analysis.

THE RANGE OF ALTERNATIVES CONSIDERED

One of the criteria that we used in measuring NEPA's effectiveness concerned the extent to which the range of alternatives had increased. We were particularly interested in whether or not the three types of alternatives expressly noted in both the CEQ guidelines and the Corps and SCS NEPA procedures were being considered: the "no project" alternative, alternatives outside the authority of the agency to implement, and nonstructural alternatives. These alternatives frequently receive some discussion in Corps and SCS environmental statements. The key question relates to how seriously these alternatives were being considered in planning and decision making.

Matters relating to the range of alternatives were investigated using plan-specific questions. One such question asked the respondents to list "only those alternatives considered which are capable of meeting

21. See W. Hill & L. Ortolano, *supra* note 18, at 4-9, *et seq.* for a description of the Corps preauthorization planning process and definition of these terms.

22. See *id.* at 4-21 *et seq.* & A-1 *et seq.* for a description of the SCS small watershed planning process.

23. As a check on this, crosstabulations were computed between the stage of planning reached and each of the other variables used in the analyses below. No statistically significant correlations were found.

the study (the sponsor's) objectives." Corps Form B and Form C respondents (N=52) listed an average of 3.8 alternatives each; SCS Form B respondents (N=44) listed an average of 3.4 alternatives each.²⁴ Despite explicit guidance from CEQ and the Washington offices of the two agencies, only two respondents indicated that the "no project" alternative had received consideration and no respondents indicated that structural alternatives outside their agency's authority to implement had been considered. E.g., a pipeline or railroad as an alternative to a channel, wastewater reclamation as an alternative to a reservoir for water supply was not considered.²⁵

Consideration of Nonstructural Alternatives

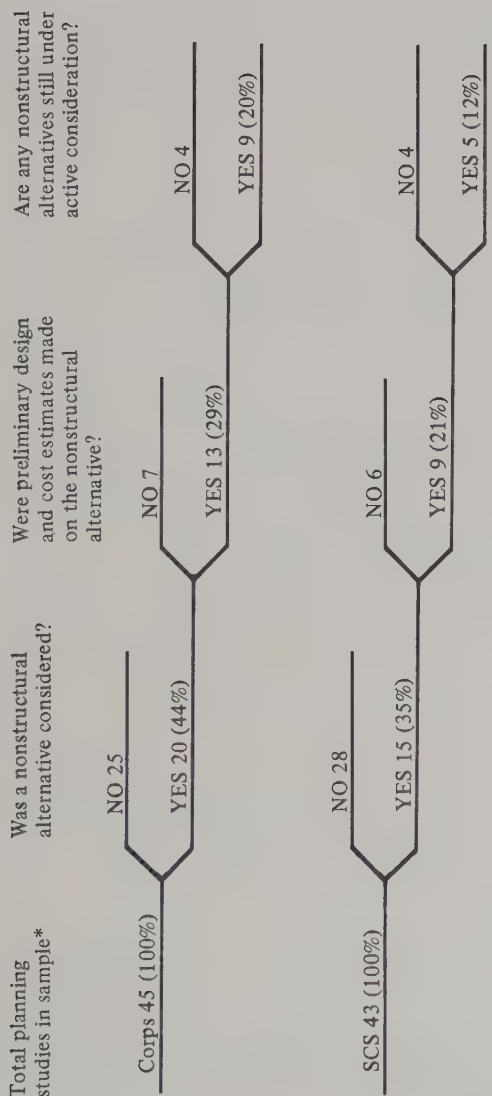
Approximately half of the Corps respondents (25/52) and a third of the SCS respondents (16/44) included a nonstructural alternative in their list of alternatives which had been considered. Two questions were used to examine how seriously these nonstructural alternatives had been considered. The first asked the respondent to place a check in front of each alternative for which "preliminary design and cost estimates" had been made. The second asked the respondent to indicate all of those alternatives which were "still being actively considered."

In order to obtain meaningful results from these data it was necessary to eliminate from the sample those cases for which planning was not sufficiently far along for serious consideration to have been given to any alternatives. The above question regarding preliminary design and cost estimates was used for screening purposes; if no such estimates had been made for any alternative, the case was eliminated from the sample. This screening procedure reduced the Corps sample from 52 to 45 and reduced the SCS sample from 44 to 43.

Figure 1 summarizes the data on the consideration of nonstructural alternatives. Of the Corps sample of 45, only 20 respondents indicated that a nonstructural alternative had been considered. Of these, only 13 were considered seriously enough to warrant preliminary design and cost estimates and only 9 were still under active

24. SCS Form C respondents were not asked this question since they would not be expected to have access to the information necessary to answer it.

25. It can be argued that it is unrealistic to require agencies to examine alternatives which they cannot possibly implement; to do so ignores the institutional constraints imposed by the budgetary process and the distribution of responsibility among different agencies. See, e.g., Wolman, *supra* note 5 at 777-78. Note also that the data here refer to structural alternatives only. Strictly speaking, some of the nonstructural alternatives listed as having been considered (e.g., flood plain zoning) are outside the authority of the Corps and SCS to implement.



*Sample includes only those planning studies for which preliminary design and cost estimates had been made for at least one alternative.

FIGURE 1
Consideration of Nonstructural Alternatives

consideration at the time of our survey. In SCS, only 15 respondents out of a sample of 43 listed a nonstructural alternative and only 9 of these received preliminary design and cost estimates. At the time of the survey 5 of these remained under active consideration.

The last figures regarding the number of nonstructural alternatives still under active consideration can be somewhat misleading without some information on the status of planning in these cases. Ideally one would like to follow all these planning studies to completion and see how many nonstructural alternatives were ultimately recommended as the final plan. While it is impossible to do this with our data, we can, nevertheless, see how many nonstructural alternatives were included in those studies which were essentially complete; that is, those for which only one alternative was listed as being under active consideration. In the Corps sample there were 25 studies for which only one alternative was still under active consideration. One of these was a nonstructural alternative: a tidal flood control study in which evacuation of the affected area was the alternative recommended in the draft survey report. In the SCS sample, 34 studies were essentially complete in that only one alternative remained under active consideration. One of these included a nonstructural solution as part of the recommended plan: a project which included a "dam, channel and flood plain land use control."

These data indicate that in the majority of Corps and SCS planning studies underway in early 1974, alternatives other than traditional structural alternatives were not receiving the sort of consideration called for by the CEQ and agency guidelines. One possible explanation for the low numbers of nonstructural alternatives reported is that such measures are less likely to receive serious consideration because they are often outside of the authority of the Corps and SCS to implement.²⁶ Another possible explanation centers on the planners' conception of the study objectives. Recall that the survey question dealing with alternatives asked respondents to list "only those alternatives considered which are capable of meeting the study (the sponsors') objectives." It is conceivable that respondents did not list nonstructural alternatives because they were not

26. Another related explanation concerns the constraints imposed by the federal cost-sharing policies in effect at the time of our survey. Prior to 1974 the federal government could not share in the cost of land acquisition. One result of this was a strong institutional bias in favor of structural flood control solutions (which could be paid for with federal dollars) as opposed to nonstructural solutions (the costs of which were borne by local interests). Section 73 of the Water Resources Development Act of 1974 (Pub. L. No. 93-251), 33 U.S.C. § 701b-11(b) (March 7, 1974) changed this policy. The federal government can now provide up to a maximum of 80 percent of the costs of land acquisition for nonstructural flood protection alternatives.

considered capable of meeting the study objectives. This explanation, while possibly valid in terms of explaining these data, is itself a damning criticism of the planning process. If nonstructural alternatives are not considered to be capable of meeting planning objectives, it suggests that these planning objectives are being defined too narrowly, e.g., the objective of "flood control" rather than "flood protection." If this is indeed the case, then nonstructural alternatives are not really going to receive serious consideration no matter how much consideration would appear to be given them.

SCS Interpretation of "Alternatives": Serious Implications?

There is one additional observation that can be drawn from these data. Over a quarter of the SCS respondents indicated that there was no alternative "still under active consideration." From an analysis of responses to other questions, however, it was apparent that there was a "project" still under active consideration. That is, the word "alternative" was being interpreted as "alternative to the proposed action."²⁷ This interpretation of alternative was observed not only in studies which were essentially complete but in studies in early stages of planning as well. To a number of SCS respondents the planning effort apparently involved "the project" and alternatives to it.

While it may be argued that this interpretation of alternatives represents nothing more than a semantic problem, we feel that it may have more serious implications. This SCS interpretation of the meaning of alternatives suggests that planning does not entail formulating a set of alternatives and then, at the conclusion of the study, selecting the "best" alternative. Rather, it suggests that there is a preconceived concept of the project and that alternatives are formulated primarily to satisfy various planning requirements.

The above interpretation of these SCS responses is supported by results from interviews with SCS field level planners conducted during this research effort. It is also borne out to some extent by responses to the following statement, to which all SCS respondents were asked to agree or disagree: "For practically all watershed projects planned to date, the alternative presented in the final work plan is the alternative proposed in the P.I." (The P.I. is the preliminary investigation used to determine whether there is a probable Public Law 566 project and whether planning authorization should therefore be sought.) Fifty-five percent of the SCS respondents agreed with this statement.

27. In the analysis above these responses were "corrected" to show one alternative still under active consideration.

This interpretation of the meaning of alternative was not observed in the Corps responses. This does not imply that the same phenomenon does not occur in the Corps; perhaps it is just less overt. We would argue, however, that the institutional constraints on the SCS small watershed program could serve to limit the consideration of alternatives.²⁸ If these institutional constraints are playing a major role in determining which alternatives receive serious consideration then there is little likelihood that NEPA will result in much more than a *pro forma* consideration of alternatives in small watershed planning.

ENVIRONMENTAL IMPACT ASSESSMENT AND THE CONSIDERATION OF ALTERNATIVES

A second measure of NEPA's effectiveness with respect to alternatives concerns the role of environmental impact assessment in the formulation and evaluation of alternatives. If environmental impact assessment is being integrated into the planning process rather than being undertaken at the conclusion of planning, one would expect it to have an effect on both the formulation and evaluation of alternatives. Information developed in the course of environmental impact assessments should be used to formulate alternatives or to modify those already under consideration in order to meet the new environmental considerations identified as a result of these assessments. Environmental impact assessments should also develop information to be used in making "trade offs" among alternatives—i.e., in the evaluation or ranking of alternative plans.

Formulation of Alternatives

A question was included on the surveys which asked whether any alternatives or project modifications had been suggested as a result of environmental studies or effect assessments done for the particular planning study referred to. The results of this question and the follow-up question, "If yes, what were these?" are summarized in Table 1. Those studies which were in the early stages of planning and

28. For example, Pub. L. No. 566 contains some explicit constraints on the consideration of alternatives in the form of limitations on watershed size, reservoir capacity and project purposes. One effect of this is to bias the planning process toward the consideration of structural alternatives; another effect is to foreclose (or at least seriously limit) the consideration of alternatives at an early stage in the planning process. In fact, prior to 1974 the SCS planning procedures required that general project features and cost-sharing arrangements be worked out *before* an application for "planning" could be submitted to the SCS Washington office for planning authorization. See W. Hill & L. Ortolano *supra* note 18, at A-7 *et seq.*

TABLE 1
 Alternatives Formulated as a Result of
 Environmental Impact Assessments

Question: "Have any alternatives or project modifications been suggested as a result of environmental studies/effect assessments (impact studies) done for this survey (for the environmental statement)?"

	<i>Corps</i>	<i>SCS</i>
YES	52%	38%
NO	48%	62%
	(N=60)	(N=82)

If yes, what were these alternatives or modifications?

	<i>Corps</i>	<i>SCS</i>
Structural modifications or refinements	17*	15
Fish and/or wildlife mitigation or enhancement	7	11
Nonstructural alternative	3	3
Other or did not specify	4	2
	(N=31)	(N=31)

*Figures given are number of respondents listing each alternative. Note that categories are not mutually exclusive. Precedence in coding was given to the more specific of the categories (e.g., a structural modification for fish enhancement was coded in the latter category).

for which a meaningful response could not be given (i.e., studies for which environmental assessments may not yet have been well underway) are not included in these data.

As shown in Table 1, approximately half of the usable Corps responses and a third of the usable SCS responses indicated that the environmental assessment had functioned to suggest new alternatives or project modifications in these planning studies. Perhaps more significantly, in approximately half of all these cases it had not functioned in this way.

As shown in the lower part of Table 1, most of the suggested alternatives resulting from these environmental assessments were structural design modifications, e.g., eliminating some of the channel work or deciding on a lower level of flood protection, and fish and wildlife mitigation and enhancement measures, e.g., buying up additional land for wildlife habitat or maintaining minimum flow releases below a dam. Only three respondents in each agency indicated that a nonstructural alternative (flood plain zoning or evacuation) had been

suggested as a result of the environmental assessment. In no case did a respondent indicate that the "no project" alternative had emerged as a viable alternative as a result of these environmental impact studies.

There is one possible explanation for these apparent low frequencies which warrants discussion. It might be argued that a reasonably complete range of alternatives had been formulated for consideration at the outset and thus there remained few alternatives to suggest. This explanation is seriously undermined, however, by the data presented above concerning the consideration of nonstructural and "no project" alternatives. These alternatives, required by both CEQ and agency guidelines, were not listed as alternatives considered in the majority of cases in the sample. Although the opportunity clearly existed for using the environmental impact assessment process to suggest these alternatives and to thereby influence the formulation of alternatives, this did not happen except in a very few of the cases.

Evaluation of Alternatives

With regard to evaluation, one could say that NEPA's policy objectives would be met if environmental factors received equal consideration with economic, technical, political, and other factors. This might be achieved via three requirements stemming from NEPA's Section 102(2)(C): (1) via the environmental impact assessment process as discussed below; (2) via the more indirect influence of the environmental resources personnel, as discussed in the next section; or (3) via the "review and comment" (R&C) process provided for in the last part of NEPA's Section 102(2)(C). The R&C process is the process by which environmental statements and other informal environmental documents are circulated to other agencies and publics in order to solicit their comments. The effects of this process on planning and decision making in the Corps and SCS were examined in this research and are reported elsewhere;²⁹ the results reported below complement the results obtained in the examination of the R&C process.

NEPA could be expected to have its most direct effect on the evaluation of alternatives via the environmental impact assessment process. One would expect that information generated by the impact assessment process would be considered in ranking the suitability of the various alternatives under consideration. In pre-testing the ques-

29. See W. Hill & L. Ortolano, *Effects of NEPA's Review and Comment Process on Water Resources Planning: Results of a Survey of Planners in the Corps of Engineers and Soil Conservation Service*, 12 WATER RESOURCES RESEARCH 1093 (1976).

tionnaires we found that everyone agreed that environmental impact assessment played a meaningful role in the ranking of alternatives. We therefore did not include this question on the surveys. Instead we designed a more strongly worded question to gauge the extent of this role. The question, included on Forms B and C, asked, again in regard to the specific planning study referred to by the respondent, whether any alternatives had been eliminated on the basis of environmental studies completed up to that time.

Table 2 shows the number of respondents in each agency who indicated that an alternative had in fact been eliminated on the basis of an environmental impact assessment. In approximately three-quarters of the planning studies referred to by those respondents able to complete the question, no alternative had been eliminated on the basis of environmental studies done up to that point in the planning process. In these planning studies anyway, the environmental impact assessment had not frequently functioned to eliminate alternatives; whether or not there were alternatives that should have been eliminated because of adverse impacts is a question that cannot be answered by the data. Moreover, as argued elsewhere,³⁰ the fact that

TABLE 2
Alternatives Eliminated on the Basis of
Environmental Impact Assessments

Question: "Have any alternatives been eliminated on the basis of environmental impact studies/effect assessments done to date?"

	<i>Corps</i>	<i>SCS</i>
YES	23%	26%
NO	77%	74%
	(N=57)	(N=82)

If yes, what were these?

	<i>Corps</i>	<i>SCS</i>
All or portions of channel work	3*	16
An impoundment site	5	1
A spoil disposal site	1	0
A levee	1	0
Did not specify	3	4
	(N=13)	(N=21)

*Figures given are number of respondents listing each alternative.

30. *Id.* at 1097.

the consideration of environmental values does not result in the elimination of an alternative cannot be construed as a failure of NEPA. There may be cases where an alternative with potentially serious adverse impacts may still be judged to be the alternative which best serves the public interest. NEPA requires only a full, good faith balancing of environmental considerations along with economic and technical considerations. (Given a large enough sample size, however, one would expect to find some alternatives eliminated on the basis of environmental considerations.)

The effect of NEPA on the evaluation of alternatives is further clarified by the results of the second half of the question—namely, if alternatives were eliminated on the basis of impact assessments, what were these alternatives? The responses, summarized in the lower half of Table 2, suggest that the effects of environmental assessments on the elimination of alternatives in these planning studies may be more limited than the percentages reported in Table 2 would imply. This is the case for two reasons. First, many of the “alternatives” described by the respondents involve fairly modest modifications to an existing alternative, e.g., the relocation of a spoil disposal site or the elimination of a short stretch of channel from a substantial channelization plan. Second, the elimination of channels, either in whole or in part, accounted for the majority of the alternatives eliminated. The fact that the channelization practices of both agencies, especially the SCS, had come under attack just prior to the time of our survey leads to serious questions regarding whether the elimination of these particular alternatives should in fact be attributed solely to environmental assessments done in response to NEPA. As argued elsewhere,³¹ the highly publicized “channelization controversy” may have been as much responsible for the elimination of the channelization alternatives noted in Table 2 as NEPA.³² The difficulty of determining that an observed effect can be attributed to NEPA has been discussed in more general terms by Hill and Ortolano.³³

INTERDISCIPLINARY PLANNING AND THE CONSIDERATION OF ALTERNATIVES

There is another NEPA provision, besides the Section 102(2)(C)

31. W. Hill, *supra* note 3.

32. See STREAM CHANNELIZATION: WHAT FEDERALLY FINANCED DRAGLINES AND BULLDOZERS DO TO OUR NATION'S STREAMS, H.R. REP. NO. 530, 93d Cong., 1st Sess. (1973) for a synopsis of the Hearings on channelization before the Conservation and Natural Resources Subcomm. of the House Comm. on Govt. Operations in 1971 and 1973.

33. W. Hill & L. Ortolano, *supra* note 18, at 1-11 *et seq.*

requirement, that might be expected to have an effect on the consideration of alternatives in agency planning. This is the Section 102(2)(A) requirement that agencies utilize a "systematic interdisciplinary approach" in planning and decision making.³⁴ If the Corps and SCS are using an interdisciplinary approach, if they are utilizing their personnel with environmental expertise for something other than the preparation of environmental statements, then one might expect to see this reflected in the consideration of alternatives. Thus our third measure of NEPA's effectiveness in improving the consideration of alternatives, a more indirect measure than those above, entails measuring the influence of agency environmental resources (ER) personnel in the consideration of alternatives.

Who Formulates the Alternatives That are Considered?

As one approach to addressing this aspect of interdisciplinary planning, we included a question on all three forms that asked the respondents to indicate who they felt had the most influence with regard to the selection of the alternatives which were to be considered in a survey investigation (watershed planning effort). The Form A questionnaire asked the question in general terms ("Who typically has the most influence . . ."). The Form B and C questionnaires tied the response to the specific planning study being referred to by the respondent ("Who has had the most influence regarding the selection of alternatives that have been considered to date?").

The responses to this question are summarized in Table 3. The results for the Corps indicate that the study manager is most frequently perceived as having the most influence in regard to the formulation of alternatives. The second most frequent response was the planning branch or section, a less specific response that would typically include the study manager.

In contrast to the Corps, the responses from the SCS planners place less significance on the influence of a single individual and more significance on the influence of the watershed planning party. However, if we separate the responses in Table 3 into "in-house" influences and "outside" influences, we find that there is no significant difference between the results from the Corps and SCS. This point is noteworthy inasmuch as it does not support the following contention which we heard repeatedly in preliminary interviews with SCS planners: NEPA's effect on planning might be seriously limited in that the federally assisted nature of the small watershed program requires that the local sponsors have the most influence with respect

34. *Supra* note 7.

TABLE 3
Most Influence Regarding Selection of Alternatives
for Consideration

	Corps	SCS
In-house:		
Study manager (watershed planning party leader)	41%	13%
Planning branch (WS planning party), "planners"	33	39
Environmental Resources personnel	2	2
Other Corps (SCS) personnel	3	13
Shared—Corps (SCS) and local sponsors	1	11
Outside the agency:		
Local sponsors (including steering committees)	4	20
Other agencies	2	4
"The public"	6	0
Other outside influences	7	0
	(N=95)	(N=128)

to the way in which planning is carried out. As shown by the results in Table 3, the federally assisted nature of the SCS program does not appear to manifest itself in terms of local sponsors' influence with respect to the selection of the alternatives which are considered in planning.

Who Selects the Alternative Which is Ultimately Recommended?

Another question included in the surveys asked respondents to indicate who, in their opinion, has the most influence regarding the selection of the alternative that is recommended in the final plan. Again, the question was worded in general terms for the Form A respondents ("[w]ho typically has the most influence . . .") while it was tied to the specific planning study referred to by the Form B and C respondents ["[w]ho has had or will have the most influence regarding the selection of the alternative that will be recommended in the survey report (work plan)?"].

As shown in Table 4, the majority of the Corps respondents felt that in-house persons or groups had the most influence regarding this aspect of the planning process. Only slightly more than a quarter of all Corps respondents felt that the most influence in regard to selection of the final alternative resided with persons or groups outside the Corps; only 12 percent felt that the local interests had the most influence.

Compare these responses with those of SCS. Only slightly more than a third of SCS respondents felt that any person or group within SCS had the most influence in regard to the selection of the final

TABLE 4

Most Influence Regarding Alternative Recommended in Final Plan

	<i>Corps</i>	<i>SCS</i>
In-house:		
Study manager (watershed planning party leader)	28%	11%
Planning branch (WS) planning party, "planners"	30	13
Environmental Resources personnel	2	0
Other Corps (SCS) personnel	5	11
Shared: Corps (SCS) and local sponsors	7	8
Outside the Agency:		
Local sponsors (including steering committee)	12	51
Other agencies	3	4
"The public"	4	0
Other outside influences	9	2
	(N=94)	(N=128)

plan. Just over half indicated that it was the local sponsors who had the most influence regarding this decision. In contrast to the previous question regarding which alternatives are to be considered, the results from this question support the notion that local sponsors have a significant influence on SCS planning. Indeed, the data in Table 4 suggest that SCS planners perceive their role as technical consultants offering assistance to local sponsors who, in the final analysis, play the key role in the ranking of alternatives. Under these circumstances, environmental quality considerations may be viewed as being constraints on what the local sponsors can have done. This is different from the position taken by the Water Resources Council's "Principles and Standards"³⁵ which requires that environmental quality be considered as an objective of planning. The difference between Corps and SCS respondents on this question (significant at the 1 percent level using Chi-square analysis) is one of the strongest manifestations observed of the difference between federally sponsored water resources planning in the Corps and federally assisted planning in the SCS.³⁶

Influence of ER Personnel in the Formulation of Alternatives

We now turn our attention to the extent to which an interdis-

35. U.S. Water Resources Council, *Principles and Standards for Planning Water and Related Land Resources*, 38 Fed. Reg. 24778 (1973).

36. See ANDREWS, ENVIRONMENTAL POLICY AND ADMINISTRATIVE CHANGE (1976) for a discussion of other ramifications of this difference between the federally sponsored and federally assisted nature of the two programs as it relates to NEPA implementation.

plinary approach involving ER personnel was used in the formulation of alternatives. In the Corps Districts these ER personnel are generally found in the environmental resources branch or section. While these ER branches and sections were typically built up around a nucleus of Corps personnel already with the Corps, many new personnel with backgrounds in environmental areas (e.g., biology, fish and wildlife management, archaeology) were hired in order to meet the requirements imposed by NEPA. This organizational group, with very few exceptions, thus owes its existence to NEPA.³⁷ SCS, unlike the Corps, hired very few new personnel in response to NEPA. This was due in part to the existence of a fairly large complement of personnel with environmental backgrounds in the State Offices prior to NEPA. These personnel were primarily engaged in the more traditional SCS activities related to soil conservation (e.g., soil surveys, preparation of farm plans, etc.) and generally were not involved in the small watershed planning program to any great extent. Both agencies thus had within their ranks persons with suitable environmental expertise who could be used in interdisciplinary planning efforts.

One measure of the extent to which interdisciplinary planning was used in the Corps and SCS is the extent to which these ER personnel were involved in the formulation of alternatives. A question was included on Forms B and C to explore this issue in the context of the specific planning studies referred to by the respondents. The question asked whether any alternatives had been "suggested by the persons in the environmental section/branch," or, in the case of SCS, "by SCS personnel outside the planning party." If the answer was yes the respondent was asked to indicate what these alternatives were.

Table 5 summarizes the results of this question. A third of the Corps respondents and slightly more than half of the SCS respondents replying to this question indicated that alternatives had been suggested by these ER personnel. In our opinion, these figures are low. In the case of these planning studies at least, this valuable in-house source of environmental expertise was not being involved in this very important aspect of planning to the extent that it could have been.

While the affirmative responses are felt to be low for both agencies, there is a significant difference (at the 1 percent significance

37. See W. Hill, *supra* note 3; J. Nienaber, *Bureaucracy, Policy and Change: The Impact of Environmentalism in the Corps of Engineers*, Resident Scholar Research Paper No. 4; BERH, U.S. Army Corps of Engineers (1975) at 29.

TABLE 5

Formulation of Alternatives by Environmental Resources Personnel

Question: "Have any alternatives been suggested by persons in the environmental resources section/branch? (by SCS personnel outside the planning party?)"

	<i>Corps</i>	<i>SCS</i>
YES	33%	57%
NO	67%	43%
	(N=57)	(N=86)

If yes, what were these alternatives?		
	<i>Corps</i>	<i>SCS</i>
Structural modifications or refinements	8*	9
Fish and/or wildlife mitigation, enhancement	6	21
Land treatment	0	9
Nonstructural alternative	2	5
The "no project" alternative	1	1
Other or did not specify	2	4
	(N=19)	(N=49)

*Figures given are number of respondents listing each alternative. Note that categories are not mutually exclusive. Precedence in coding was given to the more specific of the categories (e.g., a structural modification for fish and wildlife enhancement was coded as fish and wildlife enhancement).

level using Chi-square analysis) between the Corps and SCS responses on this question, with the Corps showing significantly less involvement of its ER personnel than SCS. One reason for this may be that the Corps ER branches or sections in most Districts were being utilized to prepare environmental statements on the higher priority construction and/or operation and maintenance projects or for projects in advanced stages of planning; in many cases personnel in these ER groups simply did not have the time to become involved in the early stages of preauthorization planning. This was not a problem in SCS in that (1) SCS had not elected to deal with its backlog of previously planned projects in as thorough a manner as the Corps and (2) these non-watershed planning personnel, while involved in environmental statement work, were generally not directly responsible for the preparation of environmental statements. Thus, the SCS in-house environmental expertise was not tied up in the preparation of environmental statements and was, therefore, more available for involvement in planning, *per se*.

If we examine the types of alternative suggested by these ER

personnel when they are involved in the formulation of alternatives, we see that the percentages in Table 5 may overstate the extent of this involvement. The alternative listed by those respondents who indicated that the ER group had suggested an alternative were coded into five categories, as shown in the second part of Table 5, based on the categories suggested by the CEQ guidelines and Corps and SCS NEPA procedures. As was the case with alternatives suggested as a result of environmental impact assessments (Table 1), the alternatives listed were often either structural design modifications or fish and/or wildlife mitigation measures. The other major category of alternative frequently listed by SCS respondents was land treatment, an alternative which as a matter of SCS policy is supposed to be part of every watershed plan. Only two respondents listed the "no project" alternative as one suggested by the ER group and only seven respondents indicated that a nonstructural alternative had been suggested by these ER personnel. While these low numbers are not surprising given the frequency with which these nonstructural and "no project" alternatives were considered overall, one might have hoped that the impetus for the consideration of these alternatives would have come from these personnel with the environmental expertise.

Furthermore, as was the case with alternatives eliminated as a result of environmental impact assessments, many of the alternatives listed dealt with channels. The implication of this observation, as noted above and discussed at length elsewhere,³⁸ is that the effect of NEPA may be even more limited than the data would indicate.

SUMMARY AND CONCLUSIONS

The overall conclusions to be drawn from the data presented above are very much dependent on one's expectations regarding what NEPA was or can be expected to accomplish. We have shown here and elsewhere³⁹ that NEPA has brought about a number of changes in the planning of Corps and SCS water projects. However, for the most part these changes have largely been what we would call "cosmetic"—that is, project modifications and mitigation measures added to protect or enhance the environment. NEPA has had a significant effect in this area. To some this is perhaps as much as should be expected.

In this paper, however, we have argued that NEPA was intended to do much more than this. It was intended to be more than a full disclosure law. It was intended to do more than insure that environ-

38. W. Hill, *supra* note 3.

39. W. Hill & L. Ortolano, *supra* note 18.

mental considerations were brought in at the end of planning to minimize adverse environmental impacts of (already planned) projects. Rather, NEPA was intended to force federal agencies to consider environmental factors equally with economic and technical factors in their planning and decision making processes. If NEPA is to accomplish this end it is necessary that environmental considerations be integrated into planning starting at the earliest possible point in the process. In our opinion one of the best measures of the extent to which environmental considerations are made an integral part of an agency's planning process is the consideration given to alternatives—the range of different alternatives considered, how the various alternatives are formulated, and the types of information that enter into the evaluation of these alternatives.

On the basis of NEPA, the CEQ guidelines and the Corps and SCS procedures implementing these, three measures of NEPA's effectiveness in improving the consideration of alternatives were identified and questions relating to these drawn up. The Corps and SCS responses to these questions, obtained via questionnaire surveys mailed to the field level offices of those agencies in 1974, are summarized below.

The first measure of effectiveness relates to the range of alternatives being considered. We were especially concerned with whether Corps and SCS planners were following the guidelines of the CEQ and their own agencies by giving serious consideration to a wide range of alternatives including nonstructural measures and the "no project" alternative. The data indicate that in the majority of the Corps and SCS planning studies included in our questionnaire survey, alternatives other than traditional structural alternatives were not receiving the sort of consideration called for by the CEQ and agency guidelines. Indeed, in only one quarter of the studies for which preliminary design and cost estimates had been made for at least one alternative had nonstructural alternatives been considered seriously enough to warrant such estimates. Moreover, only two respondents indicated that the alternative of "no action" had received consideration.

The second measure of effectiveness concerns the influence of environmental impact assessments in the formulation and evaluation of alternatives. The influence of environmental impact assessments in the formulation of alternatives was examined by asking whether any alternatives had been suggested as a result of environmental assessments done for the study. Less than half of the respondents replying to this question indicated that impact assessment had served this function. The influence of environmental impact assessment on the

evaluation of alternatives was examined by asking whether any alternatives had been eliminated from further consideration based on environmental studies. Slightly less than a quarter of the usable responses to this question were affirmative. That is, in three-quarters of these studies environmental impact assessments had not, as of the time of our survey, turned up any impacts sufficiently adverse to warrant elimination of an alternative. Furthermore, an examination of the types of alternatives listed by those respondents who answered these questions in the affirmative suggests that even these low numbers may overstate the effect of NEPA on the consideration of alternatives. Over half of the alternatives listed as having been eliminated as a result of environmental impact assessments dealt with channels, an observation which suggests that the highly publicized "channelization controversy" may have been as much responsible for the elimination of these alternatives as NEPA.

The third and final measure of effectiveness deals with the extent to which agency personnel with environmental expertise influence the consideration of alternatives. As a first step in examining this issue we asked who typically has the most influence both in regard to the selection of the alternatives that are considered and the selection of the alternative ultimately recommended in the final plan. Approximately three-quarters of the Corps respondents and half of the SCS respondents felt that the most influence with regard to the alternatives selected for consideration was exerted by the study manager or planning branch in the Corps and the watershed planning party or planning party leader in SCS. Significantly, however, for SCS the emphasis shifted to the local sponsors on the question of who had the most influence regarding the selection of the alternative recommended in the final plan. In neither agency did ER personnel appear to play a major role in deciding which alternatives would be considered. In fewer than 50 percent of the studies referred to had an alternative been suggested by these environmental resources personnel; the alternatives which were suggested were primarily modifications of existing structural alternatives or fish and wildlife mitigation measures. From these data it appears that the selection of the alternatives which are considered remains the special province of the engineers in charge of the study. Interdisciplinary planning, as measured by the involvement of non-engineers in the consideration of alternatives, was apparently not widespread.

Based on our expectations as to what NEPA should accomplish with respect to the consideration of alternatives, we would have to conclude that NEPA has not been very effective. In Corps and SCS

planning studies underway in early 1974 NEPA had not greatly affected either the types of alternatives being considered or who and what influenced the formulation and evaluation of these alternatives.

OGUNQUIT VILLAGE CORP. V. DAVIS AND JUDICIAL RELIEF UNDER THE NATIONAL ENVIRONMENTAL POLICY ACT: THE COMPLETED PROJECT PROBLEM†

The United States Court of Appeals for the First Circuit recently held in *Ogunquit Village Corp. v. Davis*¹ that, under the National Environmental Policy Act of 1969 (NEPA),² a federal agency may not be held accountable for the environmentally unsatisfactory results of a completed project, absent a showing of bad faith on the part of the agency.³ Although NEPA frequently has served as the basis for attacking proposed agency actions or projects underway, *Ogunquit* apparently was the first case involving a challenge to a completed project.⁴ In denying relief, the court expressed concern for the degree of immunity its holding would afford federal agencies. Nevertheless, it found that it could not frame a standard of relief sufficiently narrow to preclude a flood of litigation stemming from the unanticipated or overlooked environmental effects of a wide range of completed federal projects.⁵

In announcing its standard, the First Circuit ignored a less restrictive test that has evolved in other NEPA cases involving challenges to proposed or partially completed projects. The blanket application of a stricter standard to postcompletion suits can be justified only by concluding first that such challenges properly warrant different treatment under NEPA. This comment, however, shows that no principled reason exists for distinguishing completed projects. Indeed, the bad faith test adopted in *Ogunquit*, which can be met by demonstrating "a conscious design to circumvent the requirements of NEPA,"⁶ could undermine severely the enforcement of that Act. To avoid this result, this comment advocates retention of the test already applied to uncompleted projects for completed ones as well.

I. THE *Ogunquit* DECISION

The Maine coastal village of Ogunquit asked the Soil Conservation Service (Service) for aid in restoring a large but eroding sand dune that served both as a tourist attraction and as protection from the sea. The Service proposed rebuilding and replanting the dune to prevent further erosion. In 1974, work began. By dredging the Ogunquit River estuary, the Service recovered enough of the fine white quartz sand blown from the original dune to complete one-fifth of the project. For the balance of the

† Reprinted by permission of the copyright owner from 64 Virginia Law Review 629 (1978).

¹ 553 F.2d 243 (1st Cir. 1977).

² 42 U.S.C. §§ 4321-4361 (1970 & Supp. V 1975). NEPA establishes national environmental policy and procedures governing all federal agencies.

³ 553 F.2d at 246.

⁴ *Id.* at 245.

⁵ *Id.*

⁶ *Id.* at 246.

reconstruction, the Service brought coarse yellow sand and gravel from an inland source. Within a month after it began depositing this mixture on the beach, the Service finished the project, spending barely half of its appropriated money. In the process, however, the Service transformed the gently sloping white dune into a rigidly shaped mound of yellow gravel. The village objected in January 1975, the month of completion, and together with others brought suit against the Administrator of the Service.⁷

In an unreported decision, the United States District Court for the District of Maine granted summary judgment for the Service. The court found that the environmental impact statement (EIS)⁸ filed by the Service was "plainly defective in failing to provide any description of the fill to be used, the environmental consequences of using noncompatible materials, and the possible alternatives to their use."⁹ The court also rejected the Service's defense of laches.¹⁰ Nevertheless, it held that it was unable to award damages or to grant equitable relief under NEPA after a project has been completed.¹¹

On appeal, the village's primary argument¹² centered on the inadequacy of the EIS. The First Circuit, however, affirmed the district court's deci-

⁷ *Id.* at 243-44.

⁸ The EIS is a detailed statement that a federal agency must file under NEPA whenever it undertakes a project "significantly affecting the quality of the human environment." NEPA § 102(2)(C), 42 U.S.C. § 4332(2)(C) (1970). The statement must discuss:

- (i) the environmental impact of the proposed action,
- (ii) any adverse environmental effects which cannot be avoided should the proposal be implemented,
- (iii) alternatives to the proposed action,
- (iv) the relationship between local short-term uses of man's environment and the maintenance and enhancement of long-term productivity, and
- (v) any irreversible and irretrievable commitments of resources which would be involved in the proposed action should it be implemented.

Id. The Council on Environmental Quality has promulgated more specific guidelines for the preparation of an EIS. See 40 C.F.R. §§ 1500.1-.14 (1977).

⁹ 553 F.2d at 244 (quoting the district court's opinion). In fact, the district court noted that the EIS affirmatively may have misled its readers by stating that the Service would have to investigate materials from any inland sources for the suitability of their textural characteristics. *Id.* at 245.

¹⁰ The village also argued that the EIS had not disclosed adequately the rigid trapezoidal shape of the reconstructed dune. The First Circuit approved the lower court's holding that because planning documents had indicated clearly the proposed shape, laches barred any challenge to this aspect of the project. *Id.* at 244 n.1.

¹¹ *Id.* at 244-45. The village abandoned its claim for money damages on appeal. *Id.* at 245 n.3.

¹² The village also sought relief on a breach-of-contract theory. The district court dismissed the claim because the Court of Claims has exclusive jurisdiction over contract actions against federal agencies if the amount in question is under \$10,000. See 28 U.S.C. § 1346(a)(2) (1976). On appeal, the village urged the court to hear the claim on a theory of pendent jurisdiction. Nevertheless, the First Circuit agreed with the district court "that the village's contention 'does not warrant discussion.'" 553 F.2d at 244 (quoting the district court's opinion).

sion and held that NEPA plaintiffs may not obtain postcompletion relief absent a showing of bad faith.¹³ The appellate court noted that it was "deeply troubled by the dilemma posed by this case."¹⁴ It expressed its reluctance to insulate NEPA violations from relief once a project has been completed. Nevertheless, the court found the crucial factor to be its inability to articulate any standard that would afford relief in meritorious cases without opening the courts to a flood of belated suits over completed projects. Absent a sufficiently clear basis for granting relief, the court feared the possibility "of prolonged litigation and of additional, large, and unplanned expenditures of public funds in undoing and redoing" projects whenever retrospective review, benefiting from hindsight, would uncover inadequacies in an EIS.¹⁵ By requiring a showing that an agency failed in its NEPA-imposed duties in bad faith, the First Circuit sought to preclude a waste of both judicial and federal agency resources.

The court did note that ordering further investigation even after completion might offer some advantages in this case.¹⁶ Requiring an examination of alternatives at this point in effect would be directing the agency to do what it should have done earlier. The study also would inform the public and government agencies of the most practicable course to follow but would leave any funding decisions to the political process.¹⁷ Despite these benefits, however, the court once again found no sufficiently narrow standard for determining when such relief would be appropriate:

For example, were we to hold that such relief should be granted only where the defect in environmental analysis was egregious, where the defect has given rise to continuing public concern, where the plaintiffs sought relief as soon as the defect became apparent, and where the cost of further study is outweighed by the potential value to the public—conditions arguably met in this case,—we would be under no illusion that such criteria would preclude suits brought for the most minor lapses in planning.¹⁸

The court finally felt constrained to adopt a standard that denies relief unless the agency has acted in bad faith. Applying that standard to the facts in *Ogunquit*, the court, though recognizing that the project had disappointed the village, found no allegation or evidence of intentional cir-

¹³ 553 F.2d at 246.

¹⁴ *Id.* at 245. Neither NEPA's language nor its legislative history provides significant guidance to courts in fashioning remedies. See F. ANDERSON, NEPA IN THE COURTS: A LEGAL ANALYSIS OF THE NATIONAL ENVIRONMENTAL POLICY ACT 276 (1973).

¹⁵ 553 F.2d at 245.

¹⁶ *Id.* at 245-46. The First Circuit raised sua sponte the question of granting this form of relief.

¹⁷ *Id.*

¹⁸ *Id.* at 246.

cumvention by the Service of its duties under NEPA.¹⁹ The court concluded with a call for Congress to "specify administrative procedures for the consideration and resolution of post-completion problems."²⁰

II. *Ogunquit's* TEST FOR RELIEF ON COMPLETED PROJECTS

Both the project's stage of completion and the remedy sought distinguished *Ogunquit* from earlier cases that had established more lenient standards for challenges to the adequacy of an EIS. *Ogunquit* appears to have been the first case in which plaintiffs either challenged a project already completed or sought the redoing of one.²¹ The First Circuit considered the relevance of both differences in determining its test for granting relief for completed projects.

Earlier NEPA cases, all of which dealt with proposed or partially finished projects, have developed three requirements for obtaining injunctive relief.²² First, the plaintiff must prove that the defendant has violated NEPA. Courts have imposed a high standard that an EIS must meet before they will find it has fulfilled adequately the Act's requirements.²³

¹⁹ Indeed, the court seemed willing to excuse the Service's EIS omissions because the agency was one "historically experienced in such utilitarian functions as preventing soil erosion, silting, and other physical damage, [but] not geared to the subtle objective of preserving form and texture." *Id.* at 247. *But see* 7 C.F.R. §§ 650.1-.24 (1977). These guidelines, promulgated by the Service itself to regulate its activities under NEPA, clearly establish "visual resources" as a matter of prime concern to the agency. The Service has devoted an entire section of its guidelines to an affirmation of its goal of promoting "scenic beauty." *Id.* § 650.24. Asserting that "[c]ontributions to scenic beauty are a normal product of [Service] work," *id.* § 650.24(a), the Service adopted as its governing policy the "application of conservation practices having scenic beauty or visual resources values" *Id.* § 650.24(b)(2).

²⁰ 553 F.2d at 247.

²¹ The usual remedy for a violation in a proposed or partially completed project has been an injunction halting further work until the agency complies with NEPA. Note, *Program Environmental Impact Statements: Review and Remedies*, 75 MICH. L. REV. 107, 132 (1976). *See, e.g.,* *Silva v. Lynn*, 482 F.2d 1282 (1st Cir. 1973); *Conservation Soc'y of S. Vt., Inc. v. Secretary of Transp.*, 362 F. Supp. 627 (D. Vt. 1973), *aff'd*, 508 F.2d 927 (2d Cir. 1974).

²² *See generally* Note, *Evolving Judicial Standards under the National Environmental Policy Act and the Challenge of the Alaska Pipeline*, 81 YALE L.J. 1592, 1597 (1972) (vigorous judicial inquiry). In particular, courts have required that the EIS disclose the short- and long-term impact of the agency activity on a broad range of concerns termed "environmental" and explore methods of proceeding that will eliminate or reduce any adverse impact. *See id.* at 1597-1600.

²³ When the EIS deals inadequately with the nature of, the extent of, or the alternatives to a significant impact, it violates NEPA. *E.g., Minnesota Pub. Interest Research Group v. Butz*, 541 F.2d 1292 (8th Cir.), *cert. denied*, 429 U.S. 935 (1976); *Silva v. Lynn*, 482 F.2d 1282 (1st Cir. 1973); *Environmental Defense Fund, Inc. v. Froehlke*, 473 F.2d 346 (8th Cir. 1972). When the EIS has been held adequate, challenges to agency projects often have failed. *See, e.g.,* *Concerned About Trident v. Rumsfeld*, 555 F.2d 817 (D.C. Cir. 1977); *Save Our Wetlands, Inc. v. United States Army Corps of Eng'rs*, 549 F.2d 1021 (5th Cir.), *cert. denied*, 434 U.S. 836 (1977); *Environmental Defense Fund, Inc. v. Stamm*, 430 F. Supp. 664 (N.D. Cal.

Second, because of the length of time involved in the planning and implementation of most projects, courts often have required plaintiffs to rebut the defendant's assertion of the doctrine of laches.²⁴ This defense, however, has prevailed in NEPA cases only when the plaintiff's delay in bringing suit has been inexcusably long and unduly prejudicial to the defendant.²⁵ Finally, courts have balanced the costs of granting injunctive relief against the potential benefits of the remedy.²⁶ This step has provided a final safeguard against unjustified waste of resources. Cases have established, for example, that if a great investment has been made in a project and only an inconsequential environmental benefit would accrue from halting the agency's activity, even a timely and accurate challenge would not be sustained.²⁷

Ogunquit in effect has added another element, the defendant's motivation, to the first stage of the analysis above whenever the defendant agency already has completed the project. However, if material at all, bad faith would seem to be equally important whether or not the defendant agency has finished the project. Instead, the stage of completion should tend to affect only such issues as the ability of the plaintiffs to have noticed the violation and the costs of the remedy desired, both of which a court already considers when ruling on laches and balancing costs under the existing test. *Ogunquit*, by requiring bad faith in the first segment of the existing analysis, has decreased significantly the number of cases in which a court will be able to reach the other two steps of the inquiry, where the stage of completion may have some relevance.

The First Circuit justified its adding a requirement of bad faith by asserting that any different rule would be too expensive to implement. The court feared a flood of litigation if access to recovery on completed projects were too widely available. Although most attacks on completed projects probably would fail ultimately anyway, either because of the plaintiff's lack of diligence or the prohibitive costs of a remedy, these determinations would require extensive factual inquiries. The bad faith standard, on the other hand, probably allows for the summary disposition of most cases.²⁸

1977); *Upper W. Fork River Watershed Ass'n v. Corps of Eng'rs*, 414 F. Supp. 908 (N.D. W. Va. 1976), *aff'd*, 556 F.2d 576 (4th Cir. 1977), *cert. denied*, 434 U.S. 1010 (1978).

²⁴ See, e.g., *Save Our Wetlands, Inc. v. United States Army Corps of Eng'rs*, 549 F.2d 1021, 1026-28 (5th Cir.), *cert. denied*, 434 U.S. 836 (1977); *Ecology Center, Inc. v. Coleman*, 515 F.2d 860, 867-69 (5th Cir. 1975); *Clark v. Volpe*, 342 F. Supp. 1324 (E.D. La.), *aff'd per curiam*, 461 F.2d 1266 (5th Cir. 1972). See generally F. ANDERSON, *supra* note 14, at 44-45.

²⁵ See, e.g., *Ecology Center, Inc. v. Coleman*, 515 F.2d 860, 867 (5th Cir. 1975).

²⁶ See, e.g., *Environmental Defense Fund, Inc. v. Armstrong*, 352 F. Supp. 50, 60 (N.D. Cal. 1972).

²⁷ E.g., *Conservation Soc'y of S. Vt., Inc. v. Secretary of Transp.*, 508 F.2d 927, 936-38 (2d Cir. 1974).

²⁸ Although the criteria frequently applied under NEPA to projects in progress seem to rely on extensive factual inquiries, courts at times have granted summary judgment in cases challenging the adequacy of an EIS or an agency's failure to prepare one. E.g., *Upper W. Fork*

The First Circuit wanted to avoid the burden of lengthy and complex NEPA litigation that it believed only infrequently would produce a result different from that reached under the standard adopted.

The court gave a second rationale for its decision, namely, the drastic nature of the remedy requested by the plaintiffs. The court stated that it was alarmed at the potential for substantial unanticipated expenditures of public funds in redoing completed projects.²⁹ The cost of the remedy, however, already is a consideration in the precompletion test.³⁰ That test has allowed courts to consider whether the nature of the environmental harm would warrant the expense of court-ordered reconstruction.

As noted above, the court considered, but rejected, ordering further study under a test similar to, though more stringent than, that for proposed or partially completed projects.³¹ The first step would have required a showing of more than a simple violation by a defendant: the resulting environmental defect would have to have been "egregious" and to have caused "continuing public concern."³² The significance of the EIS deficiency, then, would be measured in terms of the nature of the project's consequences. Second, the plaintiff would have to have "sought relief as soon as the defect became apparent."³³ This suggests a stricter standard than the doctrine of laches, as applied in EIS cases, imposes. The last criterion, however, would parallel one element of the precompletion test in that the potential value to the public would have to outweigh the cost of further study.

The First Circuit observed that the plaintiffs in *Ogunquit* arguably met these requirements. First, the court acknowledged that the defect in environmental analysis could have been characterized as egregious. The Service's EIS had omitted any mention of the drastic effect the project would have on the appearance of the area despite the fact that the most conspicuous environmental impact the reconstruction of a sand dune might have would be its effect on the visual beauty of the beach.³⁴ Moreover, the public concern the defect had created, though localized, was on

River Watershed Ass'n v. Corps. of Eng'rs, 414 F. Supp. 908 (N.D. W. Va. 1976) (summary judgment for plaintiff), *aff'd*, 556 F.2d 576 (4th Cir. 1977), *cert. denied*, 434 U.S. 1010 (1978); Mid-Shiawassee County Concerned Citizens v. Train, 408 F. Supp. 650 (E.D. Mich. 1976) (summary judgment for defendant), *aff'd mem.*, 559 F.2d 1220 (6th Cir. 1977). In other NEPA cases, appellate courts have held summary judgment to be inappropriate. See *Ecology Center of La., Inc. v. Coleman*, 515 F.2d 860 (5th Cir. 1975); *Committee for Nuclear Responsibility, Inc. v. Seaborg*, 463 F.2d 783 (D.C. Cir. 1971).

²⁹ 553 F.2d at 245.

³⁰ See text accompanying notes 26-27 *supra*.

³¹ See text accompanying notes 16-18 *supra*.

³² 553 F.2d at 246.

³³ *Id.*

³⁴ Among the values expressly incorporated into NEPA's statement of national environmental policy is the preservation of aesthetically pleasing surroundings. See NEPA § 101(b)(2), 42 U.S.C. § 4331(b)(2) (1970).

a scale commensurate with the size of the project. Second, the court noted that the villagers had taken action promptly after they had had notice of the nature of the reconstructed dune: they complained as soon as they saw the completed project. Finally, the presence of leftover funding meant that "substantial if not completely effective remedial work could be done within the amount originally allocated."³⁵ Thus, the court appears to have found some indication of a practicable method of mitigating the harm.

Of course, ordering further study under this standard could occur only after a factual inquiry. Although this approach would provide ample safeguards against the success of frivolous claims, the court refused to grant this form of relief because doing so would open more projects to challenge, which, in turn, would necessitate extensive factual inquiries in most cases.³⁶ The First Circuit noted its discomfort with its effectively having insulated NEPA violations from remedy once a project has been completed.³⁷ Despite this professed regret, the court seems to have failed to consider sufficiently the potential impact of its decision on future NEPA enforcement. The next section analyzes the possible consequences of the *Ogunquit* decision.

III. IMPLICATIONS FOR THE ENFORCEMENT OF NEPA

By reading broadly NEPA's requirements and overseeing carefully agency compliance, courts have taken an active role in the implementation and success of NEPA.³⁸ A report issued by the Council on Environmental Quality has indicated that litigation under NEPA has had a significant influence on agency decisionmaking. Responding to the courts' determination to enforce NEPA's directives, agencies are handling the EIS process more seriously and more efficiently.³⁹ The decision in *Ogunquit*, by barring all postcompletion challenges to errors in EIS's except those alleging bad faith, could undermine NEPA's success by interfering with the valuable functions that the EIS now serves.

Previous cases have recognized that the preparation of an EIS serves three purposes.⁴⁰ First, this procedure forces an agency to engage in a more thorough analysis of the environmental implications of a particular course of action than it might have undertaken absent NEPA. The examination of conflicting opinions and of alternatives to the proposed project presumably leads to a more informed and better reasoned analysis, forcing the

³⁵ 553 F.2d at 245.

³⁶ *Id.*

³⁷ *Id.* at 244.

³⁸ See F. ANDERSON, *supra* note 14, at 15.

³⁹ COUNCIL ON ENVIRONMENTAL QUALITY, ENVIRONMENTAL IMPACT STATEMENTS: AN ANALYSIS OF SIX YEARS' EXPERIENCE BY SEVENTY FEDERAL AGENCIES 31 (1976). The report also indicated that NEPA litigation has caused "unnecessary delays" in agency action. *Id.*

⁴⁰ *Minnesota Pub. Interest Group v. Butz*, 541 F.2d 1292, 1299-1300 (8th Cir.), *cert. denied*, 429 U.S. 935 (1976).

agency to consider problems that it otherwise might have ignored.⁴¹ Second, publishing an EIS ensures full disclosure to all interested parties of the probable environmental costs of an agency action.⁴² To function effectively as a tool of full disclosure, however, the EIS must adequately alert the concerned public to the consequences of the proposed project. It cannot be "too vague, too general and too conclusionary."⁴³ Third, the EIS provides a record from which a court can determine whether an agency has made a "good faith effort" to comply with NEPA.⁴⁴ Therefore, the statement should be detailed enough so that one can infer that the agency has considered particular environmental factors in good faith.⁴⁵

The *Ogunquit* holding easily could undermine these desired benefits. First, *Ogunquit* encourages carelessness and superficiality in the preparation of an EIS, for if a problem escapes public attention until the project is completed, an agency usually will be immune from suit. This reduces an agency's incentive to probe into environmental consequences because, under the *Ogunquit* test, neither negligence nor recklessness by an agency would support a claim for relief made after completion. At worst, the difficulty of proving the bad faith standard even may encourage an agency to delete anticipated problems from its EIS to avoid drawing attention to them. If members of the public do not notice the omission until the agency has finished the project, *Ogunquit* would force them to undertake the difficult task of gathering evidence that those who prepared the EIS had acted in bad faith and not merely with incompetence.

Second, *Ogunquit* shifts the burden of discovering environmental effects to the private citizen, who now must read each EIS critically and monitor closely the agency's subsequent activities. The First Circuit tried to justify this outcome implicitly when it said in its opinion that NEPA demands "a certain duty of attentiveness from citizens."⁴⁶ Although the rationale of full disclosure for the EIS⁴⁷ anticipates some public participation in ensuring the implementation of NEPA's policy goals, it does not necessarily require such participation in the discovery of potential environmental harms. Requiring an EIS in and of itself seems to indicate a congressional intent to place the burden of discovery on agencies, with their more extensive resources, closer involvement in the proposed activity, and greater

⁴¹ *Silva v. Lynn*, 482 F.2d 1282, 1285 (1st Cir. 1973); *Environmental Defense Fund, Inc. v. Froehlke*, 473 F.2d 346, 350-51 (8th Cir. 1972).

⁴² *Minnesota Pub. Interest Group v. Butz*, 541 F.2d 1292, 1299-1300 (8th Cir.), *cert. denied*, 429 U.S. 935 (1976); *Sierra Club v. Morton*, 510 F.2d 813, 820 (5th Cir. 1975); *Silva v. Lynn*, 482 F.2d 1282, 1285 (1st Cir. 1973); *Environmental Defense Fund, Inc. v. Froehlke*, 473 F.2d 346, 351 (8th Cir. 1972).

⁴³ *Environmental Defense Fund, Inc. v. Froehlke*, 473 F.2d 346, 348 (8th Cir. 1972).

⁴⁴ See cases cited note 42 *supra*.

⁴⁵ See generally F. ANDERSON, *supra* note 14, at 202-07.

⁴⁶ 553 F.2d at 246.

⁴⁷ See notes 42-43 *supra* and accompanying text.

expertise. By exposing a project's impact on the environment, an EIS provides the public with an easy means of acquiring knowledge of effects that it might consider undesirable. Of course, many projects likely to have significant environmental consequences may be long-term efforts that will attract the attention of sophisticated environmental groups able to find inadequacies in analysis and to challenge the agency actions in time. In fact, the potential for even short-term environmental damage already serves as an impetus for such groups to discover early any adverse effects of agency projects, and the equitable doctrine of laches⁴⁸ remains available to bar unjustifiably belated or frivolous attacks. *Ogunquit*, however, would penalize those who have no opportunity to challenge an agency's determination either because the time required for completion of the project is too short, as in *Ogunquit*, or because the undesirable environmental consequences are not immediately visible. In such cases, concerned citizens reasonably could not have discovered the ill effects before project completion, and, thus, a strict standard for obtaining agency reconsideration seems unjustified.

Finally, the *Ogunquit* test undermines the ability of a court to monitor adequately an agency's good faith consideration of environmental consequences. When no mention of a particular environmental effect appears in an EIS, a court has no record from which it can determine whether the agency has considered that prospect. This may impede plaintiffs' attempts to demonstrate bad faith, which, unless established, precludes the court from ordering the agency to correct its omission.

In summary, then, *Ogunquit* may impair substantially efforts to achieve NEPA's goals. Instead of encouraging federal agencies to take into account all the environmental effects of proposed actions and to explore methods of minimizing adverse effects, the *Ogunquit* standard might promote the superficial study of consequences and the hasty completion of agency projects, especially those likely to cause controversy. The private citizen, unable to rely on the accuracy and comprehensiveness of the EIS, must discover project faults on his own before completion or afterwards secure evidence of the agency's bad faith to attack the project. If the private citizen fails in both tasks, a court will have no leverage to force the agency to cure its neglect. Such a result seems inefficient and inconsistent with the thrust of NEPA.

IV. A REBALANCING

The First Circuit in *Ogunquit* did not elaborate on the potentially adverse results of its effectively insulating NEPA violations from relief. Nevertheless, the language of the opinion suggested that any adverse impact would be justified in light of the tremendous caseload that any more flexi-

⁴⁸ See notes 24-25 *supra* and accompanying text.

ble standard would generate.⁴⁹ This view places too much weight on the inconvenience and expense of an increased burden on the judicial system. Both NEPA itself and the vigorous role courts have played in its enforcement support retention of the pre-*Ogunquit* standard even for completed projects.

NEPA clearly requires federal agencies to comply with specific procedural directives set out in section 102 of the Act,⁵⁰ including the duty to prepare, under certain circumstances, the "detailed statement" that has become known as an EIS. The EIS must disclose any potentially harmful environmental effects of a project and explore alternatives to reduce the impact. In addition to establishing procedural requirements, NEPA, in section 101, makes a sweeping declaration of national environmental policy.⁵¹ Courts increasingly have recognized that they are responsible for ensuring compliance not only with NEPA's formalities but also with its more general command that agencies give due consideration to environmental concerns in their decisions.⁵²

The First Circuit in *Ogunquit* emphasized the role of NEPA as a decisionmaking tool: "The entire apparatus [established by NEPA] is calculated to improve decisionmaking. While there is no requirement that an agency subordinate its other objectives to that dictated by environmental considerations, the hope of the statute is that at least the decision will be a broadly informed one."⁵³ This language suggests that the court thought

⁴⁹ See 553 F.2d at 245.

⁵⁰ NEPA § 102, 42 U.S.C. § 4332 (1970) (reproduced in part at note 8 *supra*).

⁵¹ This section provides, in part:

(a) The Congress, recognizing . . . the critical importance of restoring and maintaining environmental quality to the overall welfare and development of man, declares that it is the continuing policy of the Federal Government . . . to use all practicable means and measures . . . to create and maintain conditions under which man and nature can exist in productive harmony, and fulfill the social, economic, and other requirements of present and future generations of Americans.

(b) In order to carry out the policy set forth in this chapter, it is the continuing responsibility of the Federal Government to use all practicable means, consistent with other essential considerations of national policy, to improve and coordinate Federal plans, functions, programs, and resources to the end that the Nation may—

. . . .
(2) assure for all Americans safe, healthful, productive, and esthetically and culturally pleasing surroundings;

(3) attain the widest range of beneficial uses of the environment without degradation, risk to health or safety, or other undesirable and unintended consequences;

Id. § 101, 42 U.S.C. § 4331 (1970).

⁵² See, e.g., *Environmental Defense Fund, Inc. v. Corps of Eng'rs*, 492 F.2d 1123 (5th Cir. 1974); *Sierra Club v. Froehlke*, 486 F.2d 946 (7th Cir. 1973); *Silva v. Lynn*, 482 F.2d 1282 (1st Cir. 1973); *Environmental Defense Fund, Inc. v. Corps of Eng'rs*, 470 F.2d 289, 294 (8th Cir. 1972), *cert. denied*, 412 U.S. 931 (1973); *Calvert Cliffs' Coordinating Comm., Inc. v. AEC*, 449 F.2d 1109, 1117-19 (D.C. Cir. 1971).

⁵³ 553 F.2d at 246.

the judiciary's supervisory role should end once the agency has made its final decision with respect to a given project. So technical an approach, however, ignores the possibility of mitigating environmental damage after the fact. NEPA makes federal agencies responsible for exploring and disclosing methods of reducing a project's adverse impact. The Act does not expressly indicate that an agency's obligations terminate once it has finished a project. Indeed, ordering postcompletion study would seem consistent with judicial enforcement of NEPA's goals.⁵⁴

In addition, the court's solicitude for judicial resources seems misplaced in the context of NEPA litigation. In the eight years since its enactment, NEPA has generated a substantial number of legal battles.⁵⁵ Such litigation, however, is an essential element in the mechanism for enforcing the Act's standards.⁵⁶ Vigorous judicial review, anticipated by Congress in enacting so broad a statute,⁵⁷ has been successful in forcing recalcitrant agencies to accept the duties NEPA imposes.⁵⁸ However, as discussed above,⁵⁹ the *Ogunquit* decision could undermine this success severely.

Courts in NEPA cases should not treat completed projects any differently from proposed or partially completed ones. NEPA imposes duties on an agency, and the stage of completion of a project should not be relevant in whether an agency escapes them. Extensive litigation, which the *Ogunquit* court feared, is an unavoidable consequence of NEPA because

⁵⁴ See also *TVA v. Hill*, 98 S. Ct. 2279 (1978). In *Hill*, the Supreme Court held that the Endangered Species Act of 1973, 16 U.S.C. §§ 1531-1543 (1976), required work to cease on a dam that threatened the survival of a fish designated as an endangered species. Despite the many anticipated benefits of the dam and the huge expenditures, totalling over \$100 million, already sunk into construction, the Court refused to exempt the project from the clear proscriptions of the Act. "Once Congress, exercising its delegated powers, has decided the order of priorities in a given area, it is for the Executive to administer the laws and for the courts to enforce them when enforcement is sought." *Id.* at 2301.

Admittedly, the application of a statute other than NEPA and the problem posed by the threatened extinction of a species distinguish *Hill* from *Ogunquit*. Nevertheless, the Court's strict construction of an environmental law and its refusal to frame equitable exceptions to such a statute may be of some value in considering the *Ogunquit* problem.

⁵⁵ See COUNCIL ON ENVIRONMENTAL QUALITY, *supra* note 39, at 31-35.

⁵⁶ Dreyfuss & Ingram, *The National Environmental Policy Act: A View of Intent and Practice*, 16 NAT. RESOURCES J. 243, 254-56 (1976); Yarrington, *Judicial Review of Substantive Agency Decisions: A Second Generation of Cases Under the National Environmental Policy Act*, 19 S.D. L. REV. 279, 293-94 (1975); Note, *supra* note 22, at 1638-39. See generally Nolan, *The National Environmental Policy Act After United States v. SCRAP: The Timing Question and Substantive Review*, 4 HOFSTRA L.J. 213, 246-65 (1976).

⁵⁷ An article coauthored by a member of the committee staff that drafted § 102 of NEPA has suggested that the Act contemplated an important role for judicial review in mitigating agency bias and encouraging compliance with the Act. See Dreyfuss & Ingram, *supra* note 56, at 254-56.

⁵⁸ COUNCIL ON ENVIRONMENTAL QUALITY, *supra* note 39, at 31; Andrews, *Agency Responses to NEPA: A Comparison and Implications*, 16 NAT. RESOURCES J. 301 (1976) (comparison of responses of the Soil Conservation Service and the Army Corps of Engineers).

⁵⁹ See pp. 635-37 *supra*.

it serves as a vital element of the enforcement scheme Congress devised. Courts should not try to prevent needed factual inquiries into environmental effects simply because the project is a completed one.

V. CONCLUSION

The First Circuit in *Ogunquit* framed a narrow standard for relief from the consequences of completed projects in order to preclude a flood of suits seeking such relief. The court found no standard that would afford a remedy in the case before it that also would avoid extensive factual inquiries in other, less deserving actions. In placing so much weight on the inconvenience and expense of an increased burden on the judicial system, however, the court failed to balance the equities properly. The bad faith standard seems too strict in light of the potentially severe consequences for NEPA enforcement. Instead, the test already established for proposed or partially finished projects seems necessary to ensure the proper weighing of all interests that NEPA enforcement requires and adequate to separate frivolous claims from meritorious ones.

In *Ogunquit*, the First Circuit seemed anxious for a congressional solution to the dilemma of postcompletion challenges to agency actions alleged to have been environmentally irresponsible. Although Congress apparently has been willing to redefine the scope of judicial review under NEPA when a sufficiently disturbing situation has arisen,⁶⁰ existing tests seem adequate to resolve conflicting interests when a court faces an environmental challenge to a completed project.⁶¹

⁶⁰ See, e.g., Trans-Alaska Pipeline Authorization Act, 43 U.S.C. § 1652(d) (Supp. V 1975).

⁶¹ See Leventhal, *Environmental Decisionmaking and the Role of the Courts*, 122 U. PA. L. REV. 509, 515-29 (1974).

THE SCOPE OF THE PROGRAM EIS REQUIREMENT: THE NEED FOR A COHERENT JUDICIAL APPROACH†

JAMES M. KOSHLAND

Ever since the National Environmental Policy Act (NEPA)¹ became law in 1970, courts have wrestled with the problem of determining which federal activities are subject to the Act's environmental impact statement (EIS) requirement.² Courts have had difficulty determining when the provision demands a broadly based EIS evaluating a general federal policy or program rather than a narrowly drawn EIS tailored to a single project.³ The lack of a workable standard has led to ambiguous, and apparently conflicting, judge-made rules about the timing⁴ and scope⁵ of an EIS.

The statutory language establishing the EIS is the primary source of the confusion. NEPA requires the inclusion of a detailed environmental statement in "every recommendation or report on proposals for legislation and other major Federal actions significantly affecting the quality of the human environment."⁶ Courts

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1. 42 U.S.C. §§ 4321-4347 (1970 & Supp. V 1975). For an exhaustive overview of the Act and its evolution prior to 1973, see F. ANDERSON, *NEPA IN THE COURTS: A LEGAL ANALYSIS OF THE NATIONAL ENVIRONMENTAL POLICY ACT* (1973). For a survey of subsequent development through 1975, see Deutsch, *Five Years of NEPA*, 4 ENV'T'L AFF. 3 (1975).

2. The environmental impact statement requirement of NEPA, 42 U.S.C. § 4332(2)(C) (1970) is discussed in Part I. Essentially, an EIS is a detailed statement by a federal agency explaining the probable environmental consequences of a proposed action.

3. See notes 40-136 *infra* and accompanying text.

4. The point in the planning stage at which an agency must prepare an EIS remains an unresolved question. See Comment, *Planning Level and Program Impact Statements under the National Environmental Policy Act: A Definitional Approach*, 23 U.C.L.A. L. REV. 124, 134 (1975). The principal case dealing with this threshold issue of timing is *Scientists' Inst. for Pub. Information v. AEC*, 481 F.2d 1079 (D.C. Cir. 1973) [hereinafter referred to as *SIPI*].

Most courts address the question of the timing of an EIS separately from the question of its scope. For example, the court in *SIPI* reached its decision through a 2-step analysis that asked first, whether NEPA requires an impact statement covering the research and development program as a whole and second, when the agency should prepare such a statement. *Id.* at 1086. Courts often are unsuccessful in their attempts to separate these questions, however, because the issue presented is *when* an agency should prepare an EIS on *which* activities. The complex relationship between the timing and scope of the program EIS requirement often makes it difficult to tell which of these factors forms the basis of the holding. See note 113 *infra*.

5. See notes 40-136 *infra* and accompanying text.

6. 42 U.S.C. § 4332(2)(C) (1970). The full text of this section of the Act reads: "The

traditionally have interpreted this ambiguous phrase expansively to require EIS's not only for single projects,⁷ but also for groups of activities linked together by common policy themes or by cumulative environmental effects that form a "program."⁸ This expansive approach requires federal agencies to measure the environmental impact of their activities at the broadest levels of planning and development.⁹ By inducing agencies to discontinue ad hoc, piecemeal decisionmaking, this approach seeks to heighten agency sen-

Congress authorizes and directs that, to the fullest extent possible: (1) the policies, regulations, and public laws of the United States shall be interpreted and administered in accordance with the policies set forth in this Act, and (2) all agencies of the Federal Government shall— . . . include in every recommendation or report on proposals for legislation and other major Federal actions significantly affecting the quality of the human environment, a detailed statement by the responsible official on—

- (i) the environmental impact of the proposed action,
- (ii) any adverse environmental effects which cannot be avoided should the proposal be implemented,
- (iii) alternatives to the proposed action,
- (iv) the relationship between local short-term uses of man's environment and the maintenance and enhancement of long-term productivity, and
- (v) any irreversible and irretrievable commitments of resources which would be involved in the proposed action should it be implemented. Prior to making any detailed statement, the responsible Federal official shall consult with and obtain the comments of any Federal agency which has jurisdiction by law or special expertise with respect to any environmental impact involved. Copies of such statement and the comments and views of the appropriate Federal, State, and local agencies, which are authorized to develop and enforce environmental standards, shall be made available to the President, the Council on Environmental Quality and to the public as provided by section 552 of title 5, and shall accompany the proposal through the existing agency review processes"

7. See notes 41–43 *infra* and accompanying text.

8. See note 44 *infra* and accompanying text.

9. "The policies set out in the Act clearly require broad, long-term evaluation of consequences before commitment of resources, and courts are commanded to interpret the Act to give effect to those policies." Coggins, *Some Suggestions for Future Plaintiffs on Extending the Scope of the National Environmental Policy Act*, 24 KAN. L. REV. 307, 323–24 (1975). See Comment, *The National Environmental Policy Act: How It is Working, How It Should Work*, 4 ENV'T L. REP. 10,003, 10,006 (1974).

Broadening the scope of the EIS requirement permits multiple statements on the same subject matter. Under this approach, the first EIS prepared would cover pending legislation or new, broad federal policies; EIS's to follow would cover the program's impacts at the project level and would refer back to the wider, policy-oriented statements for their treatment of far-ranging alternatives and basic federal policy. Anderson, *The National Environmental Policy Act*, in *FEDERAL ENVIRONMENTAL LAW* 238, 362 (E. Dolgin & T. Guilbert eds. 1974). See *Natural Resources Defense Council, Inc. v. Morton*, 388 F. Supp. 829, 841 (D.D.C. 1974); 40 C.F.R. § 1500.6(d)(1) (1976). Advantages of this tiered approach include less costly, more circumscribed decisionmaking due to avoidance of reconsideration of basic principles each time a specific action is contemplated, creation of more sharply focused requirements for statement adequacy, and the superiority of multiple statement preparation over the procedural alternative of EIS updating that often involves only minor, cosmetic changes. Anderson, *supra* at 362–65. See Coggins, *supra* at 319–20.

sitivity to the environment.¹⁰

A judicial standard that defines the scope of the EIS requirement this broadly must provide criteria for determining which activities must meet this standard. Innumerable activities in the federal bureaucracy may qualify as a "program." These activities range from abstract and informal high-level policymaking about a federal energy policy to concrete and structured low-level decisions about the quantity and location of trash cans in national parks. Because the EIS requirement, to be effective, must be self-enforced,¹¹ federal agencies must be able to ascertain those activities subject to the requirement and also to assess their own ability¹² to draft a "program" EIS. Absent a judicial standard that provides consistent and coherent guidelines, the program EIS requirement may result in agency confusion.¹³

10. "The statute arose out of a concern that many agencies had been insufficiently sensitive to the environmental costs of their programs; NEPA's obvious, if unstated, assumption was that by requiring the agencies to explore, consider, and publicly describe the adverse environmental effects of their programs, those programs would undergo revision in favor of less environmentally damaging activities." Sax, *The (Unhappy) Truth about NEPA*, 26 OKLA. L. REV. 239, 240 (1973). See generally S. REP. NO. 296, 91st Cong., 1st Sess. 5 (1969).

An expansive approach to the EIS requirement is considered extra security against the destruction of the vitality of the NEPA because it forces agencies to recognize that many projects are parts of "a large mosaic of thousands of similar projects and that cumulative effects can and must be considered on an ongoing basis." Swain v. Brinegar, 517 F.2d 766, 775 (7th Cir. 1975). See *Scientists' Inst. for Pub. Information v. AEC*, 481 F.2d 1079, 1088 (D.C. Cir. 1973); *Atchison, Top. & S.F. Ry. v. Callaway*, 382 F. Supp. 610, 620-21 (D.D.C. 1974).

11. See Comment, *The Council on Environmental Quality's Guidelines and Their Influence on the National Environmental Policy Act*, 23 CATH. U. L. REV. 547, 550-51 (1974); 87 HARV. L. REV. 1050, 1061 n.46 (1974); 55 N.C.L. REV. 484, 489 (1977). Congress did not provide an enforcement mechanism for NEPA. The legislative history hints that the Office of Management and Budget (OMB) should control the impact statement procedure, but NEPA makes no reference to OMB, and OMB has not accepted the role of environmental watchdog. F. ANDERSON, *supra* note 1, at 11-13. The burden of enforcement has fallen upon the courts, guided to some extent by the Council of Environmental Quality (CEQ). See notes 40-56 *infra* and accompanying text. The degree to which the courts scrutinize the agencies' applications of the EIS requirement dictates the freedom with which the agencies operate under NEPA. See Anderson, *supra* note 9, at 356-62.

12. Courts should not compel an agency to prepare an EIS that contains a "crystal ball" inquiry; the agency must be able to gather significant information on the future actions and alternatives and their effects to permit meaningful analysis in the EIS. See notes 160-62 *infra* and accompanying text.

13. See notes 134-36 *infra* and accompanying text. Without clear delineation of the programs subject to the EIS requirement, litigation might be endless. Relying on a line of cases establishing the standing of public interest groups to contest administrative actions, see *United States v. Students Challenging Regulatory Agency Procedures (SCRAP)*, 412 U.S. 669, 686 (1973); *Sierra Club v. Morton*, 405 U.S. 727 (1972); *Ass'n of Data Processing Organizations, Inc. v. Camp*, 397 U.S. 150, 154 (1970), private litigants have had little difficulty obtaining judicial review of an agency's compliance with NEPA. The 654 lawsuits brought between NEPA's enactment in 1970 and 1975, Carter, *NEPA: Critics Say Promise Unfulfilled*,

This Note develops a judicial standard for determining the scope of the program EIS requirement. Part I explores the origins of the program EIS requirement. Part II chronicles the early attempts by agencies, the Council of Environmental Quality (CEQ) and the courts to develop and define the program EIS requirement. Part III then examines the various approaches taken by courts to determine the scope of a program EIS. Finally, Part IV proposes a 3-step test that draws together elements the courts have used to analyze the program EIS requirement. This formula combines those elements to give a more consistent and more effective definition of the term "program" for EIS purposes.

I. ORIGINS OF THE PROGRAM EIS REQUIREMENT: THE NEPA TEXT AND ITS LEGISLATIVE HISTORY

The final draft of the National Environmental Policy Act emerged as a compromise between those congressional forces advocating sweeping changes in federal operations affecting the environment and those content with existing agency mandates.¹⁴ As a result, the Act resembles a constitution: It recognizes the profound impact of human activity on the environment and sets forth a general policy in idealistic terms, but the means for implementing that policy, though specific, remain imprecise.¹⁵

A. *The EIS Requirement*

Section 102(2)(C) of NEPA¹⁶ requires that federal agencies prepare a detailed statement of the environmental impact of "every recommendation or report on proposals for legislation and other major Federal actions significantly affecting the quality of the human environment."¹⁷ This ambiguous statutory language fails to

193 Sci. 130, 130 (1976), illustrate that technical defenses such as standing have failed to deter environmentalists from litigating the adequacy of an agency's compliance with NEPA. See Coggins, *supra* note 9, at 309.

14. See Anderson, *supra* note 9, at 287-88. See generally *Hearing on S. 1075, S. 237, and S. 1752 Before the Senate Comm. on Interior and Insular Affairs*, 91st Cong., 1st Sess. (1969) [hereinafter cited as *1969 Hearing*]; 115 CONG. REC. 3611, 16,367, 18,869, 19,008, 26,569, 28,176, 29,066, 39,701, 40,415, 40,923, 41,008, 41,167 (1969). Anderson notes that many legislators voted for NEPA only because of their sympathy for environmental concerns. Apparently, many did not realize that NEPA's procedural requirements might broaden agency mandates. Anderson, *supra* note 9, at 242.

15. Cramton & Berg, *On Leading a Horse to Water: NEPA and the Federal Bureaucracy*, 71 MICH. L. REV. 511, 512-13 (1973).

16. 42 U.S.C. § 4332(2)(C) (1970).

17. For the full text of NEPA § 102(2)(C), 42 U.S.C. § 4332(2)(C) (1970), see note 6 *supra*.

establish the parameters of federal actions demanding an EIS.¹⁸

The legislative history of NEPA¹⁹ provides little help in interpreting the statute's language;²⁰ it mentions the EIS passage only once. The Senate report on NEPA states that section 102(2)(C) applies to "major actions, such as project proposals, proposals for new legislation, regulations, policy statements or expansion or revision of ongoing programs."²¹ Although this statement suggests that Congress intended the EIS requirement to have a broad scope, "actions significantly affecting the . . . environment" remains undefined.

B. *The Interpretation of the EIS Requirement in Light of Other NEPA Provisions*

An examination of the interaction of the EIS requirement with other provisions of NEPA leads to some understanding of the scope of that requirement. Title I of NEPA is divided into two parts. Section 101 declares the goals of NEPA in ambitious, sweeping language;²² section 102 lists several procedures and environmental considerations that federal agencies must incorporate in their decisionmaking process.²³ The statement of NEPA's goals in section 101²⁴ consists of faintly hedged generalities concerning the federal

18. "[T]his vaguely worded statute seems designed to serve as no more than a catalyst for development of a 'common law' of NEPA." *Kleppe v. Sierra Club*, 427 U.S. 390, 421 (1976) (Marshall, J., dissenting in part).

19. 1969 *Hearing*, *supra* note 14; *Joint Hearings for Discussion of a National Policy for the Environment Before the Senate Comm. on Interior and Insular Affairs and the House Comm. on Science and Astronautics*, 90th Cong., 2d Sess. (1968); S. REP. NO. 296, *supra* note 10; H.R. REP. NO. 765, 91st Cong., 1st Sess. (1969); H.R. REP. NO. 378, 91st Cong., 1st Sess. (1969).

20. Legislators voting on NEPA "neither concurred on a single interpretation of its provisions nor understood how the Act would operate." Comment, *The National Environmental Policy Act Applied to Policy-Level Decisionmaking*, 3 *ECOLOGY L.Q.* 799, 802 (1973). The legislative history primarily deals with generalities such as "establishing the dynamics of environmental systems, diagnosing the extent of environmental harm insofar as it is known (and calling for the study and measurement of what is not yet known), identifying the federal institutional shortcomings which contribute to environmental deterioration, and endorsing the need for comprehensive federal planning coordination and decisionmaking under a unified national policy." F. ANDERSON, *supra* note 1, at 1.

21. S. REP. NO. 296, *supra* note 10, at 20.

22. 42 U.S.C. § 4331 (1970).

23. *Id.* § 4332.

24. Section 102(1) incorporates the general goals of § 101 into § 102 by directing that "to the fullest extent possible: (1) the policies, regulations, and public laws of the United States shall be interpreted and administered in accordance with the policies set forth in this Chapter." *Id.* § 4332(1). Thus, § 101's declaration of environmental policy is directly applicable to the agencies and requires them to administer their enabling acts in accordance with this policy. One commentator suggests that this incorporation might require the reconsideration of all

government's duty to improve environmental quality.²⁵ The ambiguity and breadth of these goals have created uncertainty about the extent to which section 101 imposes substantive obligations upon federal agencies to consider environmental effects in their decision-making process.²⁶ Because of this uncertainty, courts rarely overturn agency decisions to proceed with a project or program on the ground that it is inconsistent with NEPA.²⁷

statutes or policies conflicting or interfering with NEPA's goals. Coggins, *supra* note 9, at 329. Coggins' interpretation of the incorporation phrase is contrary to the Supreme Court's declaration that § 102 recognizes that "where a clear and unavoidable conflict in statutory authority exists, NEPA must give way." *Flint Ridge Dev. Co. v. Scenic Rivers Ass'n*, 426 U.S. 776, 788 (1977). See *United States v. Students Challenging Regulatory Agency Procedures (SCRAP)*, 412 U.S. 669, 694 (1973).

25. See Cramton & Berg, *supra* note 15, at 517-18.

26. Although § 101 does not explicitly create substantive obligations, several courts of appeals use this section as the basis for holding that NEPA creates substantive as well as procedural obligations. See, e.g., *Environmental Defense Fund, Inc. v. Corps of Eng'rs*, 492 F.2d 1123, 1139-40 (5th Cir. 1974); *Sierra Club v. Froehlke*, 486 F.2d 946, 951-53 (7th Cir. 1973); *Conservation Council v. Froehlke*, 473 F.2d 664, 665 (4th Cir. 1973); *Environmental Defense Fund, Inc. v. Corps of Eng'rs*, 470 F.2d 289, 298 (8th Cir. 1972), *cert. denied*, 412 U.S. 931 (1973). See generally Arnold, *The Substantive Right to Environmental Quality Under the National Environmental Policy Act*, 3 ENV'T L. REP. 50,028 (1973); Cohen & Warren, *Judicial Recognition of the Substantive Requirements of the National Environmental Policy Act of 1969*, 13 B.C. INDUS. & COM. L. REV. 685 (1972); Yarrington, *Judicial Review of Substantive Agency Decisions: A Second Generation of Cases under the National Environmental Policy Act*, 19 S.D.L. REV. 279 (1974); Note, *The Least Adverse Alternatives Approach to Substantive Review under NEPA*, 88 HARV. L. REV. 735 (1975); Note, *The National Environmental Policy Act of 1969: Toward a Substantive Standard of Review*, 4 N.Y.U. REV. L. & SOC. CHANGE 153 (1974). This substantive mandate requires that courts determine the consistency of final agency decisions with the environmental goals of the statute. See *Environmental Defense Fund, Inc. v. Corps of Eng'rs*, 470 F.2d 289 (8th Cir. 1972), *cert. denied*, 412 U.S. 931 (1973); *Arkansas Community Organized for Reform Now v. Brinegar*, 398 F. Supp. 685 (E.D. Ark. 1975), *aff'd sub nom. Arkansas Community Organization for Reform Now v. Coleman*, 531 F.2d 864 (8th Cir. 1976). For example, in *Conservation Council v. Froehlke*, 473 F.2d 664 (4th Cir. 1973), the Fourth Circuit reversed a summary judgment for the defendants, holding that the district court had an obligation to review the merits of the Corps of Engineers' decision to build a dam, to determine whether the agency reached its decision after a full, good faith consideration of environmental factors made under the standards set forth in §§ 101 and 102 of NEPA, and whether the actual balance of costs and benefits struck by the agency according to these standards was arbitrary or clearly gave insufficient weight to environmental factors. *Id.* (quoting *Environmental Defense Fund, Inc. v. Froehlke*, 473 F.2d 346, 353 (8th Cir. 1972)).

Other courts of appeals, however, maintain that § 101 simply states a national policy on the environment and that NEPA imposes only procedural duties. See *Trout Unlimited v. Morton*, 509 F.2d 1276, 1282 (9th Cir. 1974); *Environmental Defense Fund, Inc. v. Armstrong*, 487 F.2d 814, 822 n.13 (9th Cir. 1973); *National Helium Corp. v. Morton*, 455 F.2d 650, 656 (10th Cir. 1971). This procedural approach suggests that NEPA is fundamentally an "environmental full disclosure law," the primary goal of which is to alert the President, the Council of Environmental Quality, the public, and the Congress to the environmental consequences of proposed agency actions. *Environmental Defense Fund, Inc. v. Corps of Eng'rs*, 325 F. Supp. 749, 759 (E.D. Ark. 1971).

27. See Note, *The Least Adverse Alternatives Approach to Substantive Review under NEPA*,

Section 102's procedural requirements have the same orientation as the broad goals in section 101.²⁸ Except for the EIS requirement, these provisions are so amorphous as to be almost unenforceable.²⁹ A typical subsection requires an agency to "utilize a systematic, interdisciplinary approach which will insure the integrated use of the natural and social sciences . . . in decisionmaking."³⁰ To enforce such a provision, a court must first decide what is meant by "systematic, interdisciplinary approach," next, formulate a standard of compliance and, finally, determine whether the agency has met this standard.³¹

supra note 26, at 746. Despite the growing recognition that NEPA does contain judicially enforceable substantive requirements, courts hesitate to overturn substantive agency decisions. *See, e.g.,* Environmental Defense Fund, Inc. v. Corps of Eng'rs, 470 F.2d 289, 300-01 (8th Cir. 1972), *cert. denied*, 412 U.S. 931 (1973). The narrow standard of review that courts use to examine whether an agency's decision to proceed with an action is consistent with the environmental goals of NEPA reflects this reluctance. *See* Environmental Defense Fund, Inc. v. Corps of Eng'rs, 492 F.2d 1123, 1139 n.33 (5th Cir. 1974). The courts have applied a 2-pronged standard of review, based on the Administrative Procedure Act § 10(e), 5 U.S.C. § 706(2) (1970), for judging the merits of an agency's decision to go forward with a project. As the United States Supreme Court explained in *Citizens to Preserve Overton Park v. Volpe*, 401 U.S. 402 (1971), the reviewing court must decide first, whether the agency acted within the scope of its authority and second, whether the ultimate decision reached was "arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law." *Id.* at 415. The second part of this standard is very narrow: Courts are not empowered to "substitute [their] judgment for that of the agency." *Id.* at 416. *See* Environmental Defense Fund, Inc. v. Corps of Eng'rs, 492 F.2d 1123, 1139 (5th Cir. 1974); *Sierra Club v. Froehlke*, 486 F.2d 946, 953 (7th Cir. 1973); *Environmental Defense Fund, Inc. v. Froehlke*, 473 F.2d 346, 353 (8th Cir. 1972). Consequently, courts overturn an agency's environmental decision only if the decision is in complete disregard of the environmental consequences or completely unjustifiable. *See* Leventhal, *Environmental Decision-making and the Role of the Courts*, 122 U. Pa. L. Rev. 509, 529 (1974).

28. According to the Senate report, § 102 requirements establish action-forcing procedures that help ensure implementation of the policies enunciated in § 101. S. REP. NO. 296, *supra* note 10, at 19-20.

29. *See* Comment, *supra* note 4, at 132. The litigative strategy of environmentalists suggests the unenforceability of these provisions. Although seeking any basis upon which a court could find noncompliance with NEPA, environmentalists rarely bother to litigate the failure of agencies to follow the procedural requirements other than the EIS. This lack of litigation has prompted one commentator to suggest that environmentalists seeking to expand the scope and effectiveness of NEPA should argue more often that sections of NEPA besides § 102(2)(C) create claims for relief. Coggins, *supra* note 9, at 324-29. However, when plaintiffs have litigated other provisions, the courts have not been receptive. *See, e.g.,* Nucleus of Chicago Homeowners Ass'n v. Lynn, 524 F.2d 225, 232 (7th Cir. 1975); *Environmental Defense Fund, Inc. v. Corps of Eng'rs*, 348 F. Supp. 916, 927 n.31 (N.D. Miss. 1972), *aff'd*, 492 F.2d 1123 (5th Cir. 1974).

30. 42 U.S.C. § 4332(2)(A) (1970).

31. In *Nucleus of Chicago Homeowners Ass'n v. Lynn*, 524 F.2d 225 (7th Cir. 1975), the court rejected the plaintiffs' argument that the court should enjoin construction of low-income housing funded by the Department of Housing and Urban Development (HUD) because HUD failed to use a "systematic, interdisciplinary approach." After stating that HUD

The unenforceability of section 102's other provisions has led environmentalists to depend upon the EIS requirement as the mainstay of NEPA.³² Proponents of NEPA have relied on the specific commands of the EIS requirement³³ as the only realistic means of producing better environmental decisions in agencies. Thus, the burden of enforcing the substantive as well as the procedural mandates of NEPA has fallen upon the EIS requirement.

The interrelationship between the EIS requirement and the other provisions of Title I of NEPA threatens the viability of the EIS requirement: If forced to bear too great a substantive responsibility, the fundamentally procedural EIS requirement may become ineffective. The purpose of the EIS requirement is to force the preparing agency to consider environmental consequences as a factor in its decision whether or not to proceed with a proposed action.³⁴ Yet nothing in the EIS requirement compels an agency to alter a decision because of environmental considerations identified in an EIS.³⁵ Consequently, an effective EIS not only must provide the agency

had considered the social environment of site neighborhoods in its negative EIS, the court refused to hold "that HUD breached its rather 'opaque' duty to engage in interdisciplinary analysis." *Id.* at 232.

32. Comment, *supra* note 20, at 807-08. See Note, *The Least Adverse Alternatives Approach to Substantive Review under NEPA*, *supra* note 26, at 735; note 29 *supra*.

33. Section 102(2)(C) requires that an EIS include a discussion of the environmental impact of the proposed action, any unavoidable adverse environmental effects resulting from the proposal's implementation, the alternatives to the proposed action, the relationship between local, short-term uses of man's environment and the maintenance and enhancement of long-term productivity, and any irreversible commitments of resources resulting from implementation of the proposed action. 42 U.S.C. § 4332(2)(C)(i)-(v) (1970), *reprinted in* note 6 *supra*. In addition to these rigorous content requirements, courts have scrutinized closely the quality of the environmental analysis contained in EIS's to determine whether the agency has completely and accurately assessed these five factors. Anderson, *supra* note 9, at 375.

34. See *Environmental Defense Fund, Inc. v. TVA*, 468 F.2d 1164, 1174 (6th Cir. 1972), *application for stay denied*, 414 U.S. 1036 (1973); 40 C.F.R. § 1500.1(a) (1976).

35. A few courts have held that § 102(2)(C) indicates a congressional intent that an agency consider the environmental factors compiled in the EIS in its decisionmaking process. *Environmental Defense Fund, Inc. v. Corps of Eng'rs*, 470 F.2d 289, 298 (8th Cir. 1972), *cert. denied*, 412 U.S. 931 (1973); *Calvert Cliffs' Coordinating Comm., Inc. v. AEC*, 449 F.2d 1109, 1118 (D.C. Cir. 1971). Conversely, one court has stated that as long as an EIS contains the information to alert the President, the Council on Environmental Quality, the public, and Congress both "to all known possible environmental consequences of the proposed agency action" and to the opinions of individuals and groups outside the agency on the environmental impact of the proposed agency action, the decisionmakers can "choose to ignore such factors" and "they will be doing so with their eyes wide open." *Environmental Defense Fund, Inc. v. Corps of Eng'rs*, 325 F. Supp. 749, 759 (E.D. Ark. 1971).

The most appropriate approach, a variant of these two positions, is for courts to force preparation of an EIS through § 102(2)(C) and to judge the consistency of the decision with the environmental goals of NEPA expressed in §§ 101 and 102(1). The function of the EIS

with a sound factual basis to make a decision on a proposed action,³⁶ but also must inform the public of the possible environmental effects of the action³⁷ so that public pressure and the threat of litigation deter the agency from disregarding the environmental consequences.³⁸ Extremely broad EIS's that require massive gathering of general information and produce speculative analysis cannot fulfill this dual role.³⁹ Unless courts provide guidelines for the scope of an EIS, the broad language of NEPA may engender many meaningless, unwieldy EIS's that both administrators and the public will ignore.

II. THE SEARCH FOR A STANDARD: EARLY ATTEMPTS AT DEFINING THE PARAMETERS OF A PROGRAM EIS

A. *The Approach of the Agencies: A Narrow View of the EIS Requirement*

The early EIS's prepared by federal agencies were narrow in scope, covering localized federal actions.⁴⁰ The "major federal ac-

requirement is strictly procedural: to force the agency to collect information that it otherwise would omit from its files. The intended impact of the collection of the data is to limit agency discretion and force the agency to exclude options it may lawfully have chosen in the absence of that information. See Widman, *Decisionmaking under NEPA*, 4 ENV'T L. REP. 50,135, 50,136 (1974).

36. See *Trout Unlimited v. Morton*, 509 F.2d 1276, 1282 (9th Cir. 1974).

37. See *Jones v. District of Columbia Redev. Land Agency*, 499 F.2d 502, 511 (D.C. Cir. 1974), *cert. denied*, 423 U.S. 937 (1975).

Several procedures inform the public of the environmental consequences of a proposed action. Prior to preparing an EIS, an agency must solicit comments on its plans from any federal agency with knowledge of the environmental impact. 42 U.S.C. § 4332(2)(C) (1970). Agencies must prepare two impact statements: a draft statement and a final statement. See 40 C.F.R. § 1500.7(a) (1976). The draft statement must circulate for review and comment to federal and federal-state agencies that have jurisdiction by law or have special expertise with respect to the environmental effects involved, *id.* § 1500.9(a)(1), and to the public, *id.* § 1500.9(d). Before preparing the final statement, the agency must carefully evaluate and consider the comments received on the draft statement. *Id.* § 1500.7(a). The agency must attach to the final statement substantive comments received on the draft statement, whether or not the agency discusses the comments in the final statement. *Id.* § 1500.10(a).

In addition, the CEQ informs the public of the availability of EIS's for comment by listing in its monthly publication, the *102 Monitor*, the EIS's filed with the CEQ during the preceding month and indicating which individuals in the agency to contact for information about the EIS. Note, *Program Environmental Impact Statements: Review and Remedies*, 75 MICH. L. REV. 107, 119 n.62 (1976).

38. See McGarity, *The Courts, the Agencies and NEPA Threshold Issues*, 55 TEX. L. REV. 801, 806-07 (1977).

39. An early CEQ memorandum supporting a program EIS requirement conceded that if the definition of the action being taken is too broad, "the resulting analysis is likely to be too general to prove useful." Council on Environmental Quality, *Memorandum to Federal Agencies on Procedures for Improving Environmental Impact Statements* (May 16, 1972), *reprinted in* 3 ENVIR. REP. (BNA) 82, 87 (1972) [hereinafter cited as CEQ Memorandum].

40. See Anderson, *supra* note 9, at 338; Comment, *supra* note 9, at 10,006.

tions"⁴¹ analyzed in these EIS's fell into two categories: a single undertaking requiring preparation of an EIS because of the amount of federal time, money or effort it received,⁴² or a project—a series of federal actions that taken individually are too "minor" to require an EIS but cumulatively have an effect significant enough to amount to a major federal action.⁴³ Neither category was especially broad. Administrators often did not apply the EIS requirement to a federal program—a series of federal actions that are individually major and additionally have cumulative environmental effects that dictate preparation of a more comprehensive EIS.⁴⁴

In addition to the narrow coverage of the EIS requirement in the early years of NEPA, agency reluctance to police the drafting of

41. Single federal undertakings constituting a "major federal action" include federal actions with a direct effect on the environment, *see* Committee for Nuclear Responsibility, Inc. v. Seaborg, 463 F.2d 783 (D.C. Cir.) (nuclear warhead test detonation), *application for injunction in aid of jurisdiction denied sub nom.* Committee for Nuclear Responsibility, Inc. v. Schlesinger, 404 U.S. 917 (1971), as well as actions with indirect effects, *see* Greene County Planning Bd. v. Federal Power Comm'n, 455 F.2d 412 (2d Cir. 1972) (granting of license to construct power line). *See* Council of Environmental Quality, *Statements on Proposed Federal Actions Affecting the Environment, Guidelines*, 36 Fed. Reg. 7724–25 (1971). For a criticism of the inclusion of actions with indirect effects in the category of actions requiring EIS's, *see* Friedman, *The National Environmental Policy Act of 1969—The Brave New World of Environmental Legislation*, 6 NAT. RESOURCES LAW. 44, 51–56 (1973).

42. The statutory language that defines the federal action to which the EIS requirement applies, "major federal action significantly affecting the quality of the human environment," seems to require that a court first find the action "major" and then find it to have potentially significant environmental effects. Anderson, *supra* note 9, at 345. The determination of whether an action is sufficiently major involves ascertaining the degree and character of the federal involvement. *See* F. ANDERSON, *supra* note 1, at 89–96. Courts, however, have lowered the level of federal action to which § 102(2)(C) applies, Anderson, *supra* note 9, at 339, so that a court rarely rules that an action is too "minor" to require preparation of an EIS.

43. This accumulation of minor actions can occur "when one or more agencies over a period of years puts into a project individually minor but collectively major resources, when one decision involving a limited amount of money is a precedent for action in much larger cases or represents a decision in principle about a future major course of action, or when several Government agencies individually make decisions about partial aspects of a major action." 40 C.F.R. § 1500.6(a) (1976).

44. Comment, *supra* note 20, at 801 n.11. A "program" for EIS purposes is defined functionally rather than categorically. A program exists when related individual actions mandate consideration of cumulative environmental effects or collectively raise broad questions of policy. *See* CEQ Memorandum, *supra* note 39, at 87. One EIS covering all related individual actions avoids duplication and enables more exhaustive evaluation of environmental effects and alternatives than do separate EIS's on each individual action. *Id.*

A review of the EIS's received by the CEQ between July 1972 and January 1973 reveals that only a small fraction (23 out of 151 draft and 496 final EIS's) of the impact statements prepared covered programs. Comment, *supra* note 20, at 801 n.11. Agencies that prepare EIS's on single undertakings or projects may fail to prepare them on programs. For example, the Bureau of Land Management of the Department of Interior prepared EIS's on individual oil and gas leasing actions but failed to prepare them on oil and gas leasing programs.

EIS's⁴⁵ contributed to the provision's ineffectiveness. The EIS process in many agencies became a pro forma exercise providing post hoc rationalization for a decision to proceed.⁴⁶ The agencies' implementation of the EIS process during this period rendered the substantive mandate of NEPA insignificant.⁴⁷

B. *Guidelines Developed by the Council of Environmental Quality: A Broader View of the EIS Requirement*

Faced with the agencies' failure to develop satisfactory guidelines defining the scope of the EIS requirement,⁴⁸ the Council of Environmental Quality (CEQ), established under Title II of NEPA,⁴⁹ attempted to define standards for agency compliance with the EIS requirement.⁵⁰ In conjunction with this effort, the CEQ actively

Strohbehn, *NEPA's Impact on Federal Decisionmaking: Examples of Noncompliance and Suggestions for Change*, 4 *ECOLOGY L.Q.* 93, 93 n.4 (1974).

45. Six years of hundreds of legal challenges to agency NEPA noncompliance testify amply to the agencies' lack of enthusiasm for changes required by NEPA. Comment, *NEPA Off the Top: The Supreme Court Interprets Impact Statement Requirement*, 6 *ENV'T'L L. REP.* 10,164, 10,167 n.38 (1976) [hereinafter cited as *NEPA Off the Top*]. Most commentators have traced this reluctance to the "mission" bias of federal agencies. The prime concern of an agency charged with missions such as road or dam construction is completion of the specific goal even at the expense of the environment. See, e.g., Stoel, *Environmental Decision-Making by Federal Agencies*, 4 *ENV'T'L L. REP.* 50,128 (1974); Comment, *supra* note 4, at 128; Comment, *Four Years of Environmental Impact Statements: A Review of Agency Administration of NEPA*, 8 *AKRON L. REV.* 545, 558-59 (1975) [hereinafter cited as *Four Years of EIS's*]. Thus, the greater reluctance of a long-established agency, such as the Department of Interior, is not surprising. See Comment, *supra* note 4, at 129; COUNCIL OF ENVIRONMENTAL QUALITY, *ENVIRONMENTAL IMPACT STATEMENTS: AN ANALYSIS OF SIX YEARS' EXPERIENCE BY SEVENTY FEDERAL AGENCIES* 24 (1976). A major reason for this inertia is that NEPA "requires far-sighted planning, but it must live in a habitat that is focused on the short-term." Widman, *supra* note 35, at 50,135.

46. See, e.g., The Environmental Impact Statement of the National Environmental Policy Act: Criticisms of Agency Performance and Recommendations for Reform, Address by Baldwin to the Law Forum and Environmental Law Society of Stanford Law School (Dec. 9, 1970), reprinted in F. GRAD, *ENVIRONMENTAL LAW* § 13.01, at 13-19 (1971). Baldwin notes that the Corps of Engineers prepares EIS's primarily for projects designed to foster population or economic growth; the EIS's contain neither a discussion of the rationale for the projects nor an analysis of their secondary environmental effects. The Corps never questions the cost-benefit ratios upon which it places so much reliance. *Id.* at 13-23. See generally Cramton & Berg, *supra* note 15; Findley, *The Planning of a Corps of Engineers Reservoir Project: Law, Economics and Politics*, 3 *ECOLOGY L.Q.* 1 (1973). See also Calvert Cliffs' Coordinating Comm., Inc. v. AEC, 449 F.2d 1109 (D.C. Cir. 1971) (criticizing the AEC's EIS's).

47. One commentator suggested in 1973 that NEPA's goal of incorporating environmental values into federal decisionmaking had failed. Sax, *supra* note 10, at 245.

48. See notes 40-47 *supra* and accompanying text.

49. 42 U.S.C. §§ 4341-4347 (1970). Title II establishes the CEQ as an executive council and defines its membership and duties. *Id.* § 4342. The CEQ's primary functions include assisting in the preparation of an annual Environmental Quality Report, gathering information on trends in environmental quality, and recommending policies to the President to promote the improvement of environmental quality. *Id.* § 4344.

50. A 1970 Executive Order gave the CEQ authority to issue guidelines for use in the

supported a broadly based program EIS requirement.⁵¹

Despite its authority to promulgate broad standards for application of the program EIS requirement,⁵² the CEQ lacked the means to compel the agencies to adopt these standards.⁵³ Consequently, agency administrators continued to apply the narrow view of an EIS.⁵⁴ The Guidelines on the Preparation of Environmental Impact Statements,⁵⁵ however, were not without impact; courts began using the Guidelines to develop their own standards.⁵⁶

EIS process. Exec. Order No. 11,514, § 3(H), 3 C.F.R. §§ 271, 272 (1974). Though not bound by the Guidelines, federal agencies have used them in interpreting the requirements of NEPA. See Comment, *supra* note 9, at 10,005. For a good example of incorporation of the Guidelines' concepts into an agency's application of the EIS requirement, see *Administration of Federal Aid for Highways: Environmental Impact and Related Statements*, 37 Fed. Reg. 21,809 (1972).

Courts also have recognized the importance of the CEQ Guidelines. In *Greene County Planning Bd. v. Federal Power Comm'n*, 455 F.2d 412, 421 (2d Cir. 1972), for example, Judge Kaufman stated: "Although the Guidelines are merely advisory and the Council on Environmental Quality has no authority to prescribe regulations governing compliance with NEPA, we would not lightly suggest that the Council, entrusted with the responsibility of developing and recommending national policies 'to foster and promote the improvement of the environmental quality' . . . has misconstrued NEPA."

51. As early as 1972, the CEQ advocated preparation of EIS's for large-scale federal programs still in the planning stage. CEQ Memorandum, *supra* note 39, at 87.

Early support by the CEQ was instrumental in establishing the program EIS requirement. One of the earliest and most important cases holding that the EIS requirement applied to federal programs, *Scientists' Inst. for Pub. Information v. AEC*, 481 F.2d 1079, 1087-88, 1090 (D.C. Cir. 1973), cited the CEQ Memorandum, *supra* note 39, as authority for its holding.

52. Exec. Order No. 11,514, *supra* note 50. The present CEQ Guidelines enumerate situations in which an agency should prepare a program EIS, including situations in which the agency assesses "the environmental effects of a number of individual actions on a given geographical area (e.g., coal leases), or environmental impacts that are generic or common to a series of agency actions (e.g., maintenance or waste handling practices), or the overall impact of a large-scale program or chain of contemplated projects (e.g., major lengths of highways as opposed to small segments)." 40 C.F.R. § 1500.6(d)(1) (1976).

53. See note 50 *supra*.

54. See notes 40-47 *supra* and accompanying text.

55. 40 C.F.R. §§ 1500.1-14 (1976).

56. The interaction between the CEQ and the courts in interpreting the EIS requirement has been instrumental in developing the program EIS requirement. Several courts have followed the CEQ Guidelines and memoranda in interpreting the statutory clause of "major Federal actions significantly affecting the quality of the human environment." See, e.g., *Minnesota Pub. Interest Research Group v. Butz*, 498 F.2d 1314, 1321 (8th Cir. 1974); *Environmental Defense Fund, Inc. v. TVA*, 468 F.2d 1164, 1177 (6th Cir. 1972); *Carolina Action v. Simon*, 389 F. Supp. 1244, 1246 (M.D.N.C. 1975). The interaction, however, has not always flowed in one direction. After the District of Columbia Circuit used the CEQ Memorandum, *supra* note 39, as authority for its holding in *Scientists' Inst. for Pub. Information v. AEC*, 481 F.2d 1079, 1091 (D.C. Cir. 1973), that NEPA required a program EIS for the research and development program at issue, see note 51 *supra*, the CEQ incorporated the Circuit's holding as to the scope of the EIS and the Circuit's test as to the timing of the preparation of a program EIS, 481 F.2d at 1091, 1094, in its new Guidelines. See 40 C.F.R. § 1500.6(d)(2) (1976); Comment, *supra* note 11, at 570-71.

C. *Early Court Intervention: Case-by-Case Confusion*

Because the agencies were reluctant to give vitality to the EIS requirement⁵⁷ and because the CEQ, though recognizing the need for program EIS's, was helpless to enforce its Guidelines,⁵⁸ private citizens interested in NEPA's enforcement looked to the courts for the development and enforcement of standards for agency preparation of program EIS's.⁵⁹

Courts first began to require the preparation of program EIS's for projects initiated before the passage of NEPA but continuing indefinitely. Although the applicability of NEPA to such ongoing projects was not obvious, several courts ordered the preparation of EIS's on the present and future effects of the "program" involved in each case.⁶⁰

The application of the EIS requirement to continuing projects provided the foundation for judicial recognition of a program EIS requirement, but a fully developed standard for implementing that requirement did not emerge from subsequent cases. The scope of the "programs" to which the courts first applied the EIS requirement did not go far beyond single major federal undertakings and single federal projects. Nearly all involved a single agency performing a single function in a small geographic area, albeit over a substantial or indefinite length of time.⁶¹ Moreover, because of the

57. See notes 40-47 *supra* and accompanying text.

58. See notes 48-56 *supra* and accompanying text.

59. See Anderson, *supra* note 9, at 278; note 13 *supra*. Most courts found jurisdiction to review NEPA actions in the Administrative Procedure Act, 5 U.S.C. §§ 701-706 (1970). See, e.g., *United Family Farmers, Inc. v. Kleppe*, 418 F. Supp. 591, 594-95 (D.S.D. 1976). But see *Califano v. Sanders*, 430 U.S. 99 (1977) ("The Administrative Procedure Act does not afford an implied grant of subject-matter jurisdiction permitting federal judicial review of agency action.") Some courts, however, viewed NEPA itself as presenting a federal question independently reviewable under 28 U.S.C. § 1331 (1970). See, e.g., *Silva v. Lynn*, 482 F.2d 1282, 1283 (1st Cir. 1973); *Cape Henry Bird Club v. Laird*, 359 F. Supp. 404, 409 (W.D. Va.), *aff'd*, 484 F.2d 453 (4th Cir. 1973). For a comprehensive discussion of the different bases of judicial review of agency compliance with NEPA, see Leed, *The National Environmental Policy Act of 1969: Is the Fact of Compliance a Procedural or Substantive Question?*, 15 SANTA CLARA LAW. 303, 307-11 (1975).

60. For an analysis of these early cases, see F. ANDERSON, *supra* note 1, at 176-78. In one such case, *Lee v. Resor*, 348 F. Supp. 389 (M.D. Fla. 1972), the court ordered the preparation of an EIS on a 20-year-old continuing program of the Corps of Engineers to control water hyacinths in a Florida river. After reviewing the language and legislative history of NEPA, the court concluded: "It would be ironic if Congress did not intend to affect those projects and agency decisions that provided the impetus for the Act. Congress doubtless intended that NEPA have some application to the type of situation presented here." *Id.* at 395.

61. For a discussion of cases reflecting the narrow scope of these early federal "pro-

minimal amount of program EIS litigation⁶² and the understandable uncertainty about the scope of the EIS,⁶³ courts had difficulty articulating a cogent standard delineating the program EIS requirement.

Early cases considering the federally financed interstate highway system reflect the courts' inability to develop a consistent standard for program EIS cases.⁶⁴ The litigation arose when the Department of Transportation prepared or considered preparing impact statements only on the individual segments of a highway and only after finalizing its plans and receiving approval and appropriations for the particular segment. Environmentalists challenged this piecemeal approach as an attempt by the Department to evade its statutory duty of evaluating the environmental effects of the entire highway and to avoid the potentially adverse effects that a comprehensive EIS would adduce. The challenge attained partial success. In *Thompson v. Fugate*,⁶⁵ for example, the district court held the preparation of separate EIS's for a 21-mile highway segment and an 8-mile segment to be inadequate.⁶⁶ Instead, it required that the Department prepare a broader EIS covering the entire 29-mile urban highway project. The court simply asserted that the beltway system "must be viewed as a whole" and "cannot be fractionalized";⁶⁷ it did not attempt to devise a test for ascertaining the scope of federal activities subject to the EIS requirement.

In another case involving a challenge to the same Department of Transportation procedure, *Citizens for Mass Transit Against Freeways v. Brinegar*,⁶⁸ the court sought to frame a test for applying the program EIS requirement. The court indicated that it would require preparation of a program EIS only when the agency deliberately had attempted to avoid NEPA requirements by providing a separate EIS for each road segment.⁶⁹ Finding that the officials in the present case had not acted "in a clandestine manner," the court

grams," see Anderson, *supra* note 9, at 396-402; Note, *Retroactive Application of the National Environmental Policy Act of 1969*, 69 MICH. L. REV. 732, 737-42 (1971).

62. Anderson attributes the infrequency of challenges to agency inaction during the early years of NEPA to uncertainty about the scope of the program EIS requirement. Anderson, *supra* note 9, at 338.

63. See notes 14-39 *supra* and accompanying text.

64. See notes 65-74 *infra* and accompanying text.

65. 347 F. Supp. 120 (E.D. Va. 1972).

66. *Id.* at 124.

67. *Id.*

68. 357 F. Supp. 1269 (D. Ariz. 1973).

69. *Id.* at 1284.

held the preparation of an EIS for the entire highway system unnecessary.⁷⁰ Not surprisingly, no other court has used the narrow *Brinegar* test. Its use would undermine the program EIS requirement completely; proving deliberate misconduct would be virtually impossible.

In a third early highway case, *Committee to Stop Route 7 v. Volpe*,⁷¹ the court, after ordering preparation of an EIS that the Department of Transportation refused to provide, proposed an analytic test for determining the appropriate length of highway to be considered in a single EIS. Noting that it could not specify a precise mileage measure, the court held that the segment length the Department selected must assure "adequate opportunity for the consideration of alternatives (both whether and where to build) required by the Act."⁷² The proposed test appears to square with the language and purposes of the EIS requirement,⁷³ but it begs the question. There are alternatives to any length of highway. An EIS adequately will examine alternatives that may affect a decision whether to proceed on a program level only if an appropriate length of highway is selected initially.⁷⁴

These early highway cases demonstrate the inconsistent results that can occur without a workable standard for analyzing the proper scope of a program EIS. Judicial inconsistency fosters administrative inconsistency, which in turn threatens effective environmental planning.

III. THE EVOLUTION OF MULTITIERED TESTS FOR DETERMINING THE SCOPE OF A PROGRAM EIS

A. *Examining the Interrelationship Between a Project and a Program*

The disappointing early attempts to develop a workable stan-

70. *Id.*

71. 346 F. Supp. 731 (D. Conn. 1972).

72. *Id.* at 740.

73. Not only is a discussion of alternatives to the proposed action required as part of an EIS, 42 U.S.C. § 4332(2)(C)(iii) (1970), but § 102(2)(E) compels agencies to "study, develop and describe appropriate alternatives to recommended courses of action in any proposal which involves unresolved conflicts concerning alternative uses of available resources." *Id.* § 4332(2)(E).

74. See Comment, *supra* note 20, at 824. For example, the alternatives to a 10-mile stretch of highway and to an entire interstate highway through one state are likely to be very different in both number and environmental significance. An EIS pertaining to the 10-mile stretch may not provide "adequate opportunity for consideration of alternatives" that will affect the Federal Highway Administration's decision regarding construction of the entire highway.

dard for determining the scope of program EIS's led to further court experimentation with alternative standards.⁷⁵ Courts gradually began to consider the interrelationship, if any, of a federal project and a more broadly based federal "program," but no single, consistent standard emerged from this experimentation. The following discussion examines the different judicial approaches toward the relationship between a project and a program.

1. The "independent utility" standard.

In *Environmental Defense Fund, Inc. v. Armstrong*,⁷⁶ plaintiff challenged the construction of the New Melones Dam in northern California, contending that the agency directing construction of the

75. As courts struggled to develop a workable standard for determining the scope of program EIS's, they also endeavored to develop a uniform, well-defined standard of judicial review of agency compliance with the procedural requirements of § 102 of NEPA, 42 U.S.C. § 4332(2)(C) (1970). See Note, *supra* note 37, at 123-25. Even though § 102 establishes specific procedural requirements and directs all federal agencies to implement these requirements "to the fullest extent possible," it does not provide standards of judicial review. Most courts have applied a "rule of reason" standard for this review without indicating a statutory source for it. See, e.g., *Minnesota Pub. Interest Research Group v. Butz*, 498 F.2d 1314, 1320 (8th Cir. 1974); *Environmental Defense Fund, Inc. v. Corps of Eng'rs*, 492 F.2d 1123, 1131 (5th Cir. 1974); *National Helium Corp. v. Morton*, 486 F.2d 995, 1002 (10th Cir. 1973), *cert. denied*, 416 U.S. 993 (1974); *Scientists' Inst. for Pub. Information v. AEC*, 481 F.2d 1079, 1092 (D.C. Cir. 1973). The "rule of reason" standard requires that plaintiffs show that the agency determination not to prepare an EIS, or to prepare a narrow EIS, was "not reasonable under the circumstances." *Minnesota Pub. Interest Research Group v. Butz*, 498 F.2d 1314, 1320 (8th Cir. 1974). This standard often leads to vigorous de novo review of the agency decision. If a plaintiff raises substantial environmental issues, a trial court must examine and weigh the evidence to determine whether the agency reasonably concluded that the particular project would have no effects substantially altering environmental quality. See *Hiram Clarke Civic Club, Inc. v. Lynn*, 476 F.2d 421, 425 (5th Cir. 1973). Other courts apply the narrower "arbitrary and capricious" standard, attempting to discern only whether the agency has committed a clear error of judgment. See *Nucleus of Chicago Homeowners Ass'n v. Lynn*, 524 F.2d 225, 229 (7th Cir. 1975); *Sierra Club v. Froehlke*, 359 F. Supp. 1289, 1332-34 (S.D. Texas 1973), *rev'd sub nom. Sierra Club v. Callaway*, 499 F.2d 982 (5th Cir. 1974). Finally, the Ninth Circuit limits its review to the question of whether the agency acted "without observance of procedure required by law," a standard set out in § 10(e)(4) of the Administrative Procedure Act, 5 U.S.C. § 706(2)(D) (1970). *Daly v. Volpe*, 514 F.2d 1106, 1109 (9th Cir. 1975); *Lathan v. Brinegar*, 506 F.2d 677, 693 (9th Cir. 1974). But cf. *Trout Unlimited v. Morton*, 509 F.2d 1276, 1282-83 (9th Cir. 1974) ("The 'without observance of procedure required by law' § 706(2)(D) standard is less helpful . . . than one might wish.").

The importance of the precise standard chosen may be minimal, however; regardless of the standard used, courts deciding questions of procedural compliance generally conduct vigorous review. Anderson suggests that the majority of courts applying the minimum scrutiny, "arbitrary and capricious" standard pay only "lip service" to it, engaging in vigorous review as if they were applying the tougher reasonableness standard. F. ANDERSON, *supra* note 1, at 96-101. He cites *Hanly v. Kleindienst*, 471 F.2d 823 (2d Cir. 1972), *cert. denied*, 412 U.S. 908 (1973), as a prime example of this phenomenon. F. ANDERSON, *supra* note 1, at 97-98.

76. 352 F. Supp. 50 (N.D. Cal. 1972), *supplemented*, 356 F. Supp. 131 (N.D. Cal.), *aff'd*, 487 F.2d 814 (9th Cir. 1973).

dam, the Corps of Engineers, should prepare a program EIS "viewing the system of state and federal [water] projects as an integrated unit."⁷⁷ In rejecting this contention, the court focused on the justification for the project. The court found the dam to be an individual undertaking, not an indivisible part of an integrated statewide water system.⁷⁸ Under this standard, the court would require preparation of a program EIS for a project lacking "independent utility"—a project deriving its utility from a larger program.⁷⁹

Although the "independent utility" standard has merit in uncomplicated situations, it provides little guidance in analyzing complex programs having many component projects. In such cases, each component project may serve independent functions despite "dependence" on the overall program.⁸⁰ For example, federal coal leases are independent of offshore oil leases, yet the two arguably are inseparable parts of the federal energy program.⁸¹

2. *Nominal considerations and logical nexus.*

The court in *Movement Against Destruction v. Volpe*⁸² adopted a more sophisticated approach in evaluating the relationship between a project and a program. Employing a 2-level analysis, the court concluded that a program EIS was not necessary for the complete system of interstate highways surrounding the city of Baltimore. At the first level, the court looked for explicit federal action treating

77. 356 F. Supp. at 139.

78. *Id.*

79. For applications of the "independent utility" standard, see *Trout Unlimited v. Morton*, 509 F.2d 1276 (9th Cir. 1974); *Sierra Club v. Stamm*, 507 F.2d 788 (10th Cir. 1974).

80. The courts' failure to analyze whether NEPA requires formulation of both a project EIS and a program EIS when a project in question is part of an overall program adds to the difficulty in applying this test. In the Department of Transportation cases, for example, see notes 64-74 *supra* and accompanying text, the courts failed to examine whether a program EIS should be prepared on the entire highway to complement project EIS's drafted for the appropriate segments of the highway. Instead, the courts asked only whether the prepared EIS was adequate or should be replaced by a broader EIS. *Cf.* *Natural Resources Defense Council, Inc. v. Morton*, 388 F. Supp. 829 (D.D.C. 1974) (Bureau of Land Management's program EIS inadequately assessed impact of grazing permit program on specific local environments; court required additional, localized EIS's). The courts' analytical errors may stem from their failure to understand fully the relationship between project EIS's and program EIS's. The program EIS covers broad federal policies at the planning stage; more specific EIS's covering projects included in the program should be drafted at a later stage. See note 9 *supra*.

81. Coal and oil leases arguably are related in the national energy policy because the level of conservation set as a matter of national policy will dictate the level of oil and coal exploration. In turn, the amount of coal exploration will depend on the amount of oil exploration, and vice versa. See *Sax*, *supra* note 10, at 241.

82. 361 F. Supp. 1360 (D. Md. 1973).

the highway system as a unit.⁸³ Documentation that either the implementing agency or another governmental entity with authority over the highway system had treated the entire system as a unit in its decisionmaking process would constitute evidence that the highway system was a program. Finding no nominal federal consideration,⁸⁴ the court proceeded to the second level to determine whether implicit links connected the highway segments to the entire system.⁸⁵ Failing to discover such a connection, or logical nexus, between the highway segments and the entire network, the court did not require preparation of an EIS for the entire system.

*Sierra Club v. Callaway*⁸⁶ illustrates the closest scrutiny of the underlying relationship between a project and a program. The Sierra Club challenged the adequacy of an EIS prepared for the Wallisville Dam project, contending that a program EIS should be prepared for the entire Trinity River project, a huge undertaking involving the straightening of the Trinity River.⁸⁷ After extensive analysis, the district court still could not decide whether the nexus existing between the dam and river projects required preparation of a program EIS for the combined projects.⁸⁸ The court did find that the Wallisville EIS inadequately documented the dam's alleged local purposes and, pending further factfinding to determine the dam's true character and purposes, enjoined action on both projects.⁸⁹

In reversing the district court's decision, the Fifth Circuit emphasized nominal considerations the lower court had ignored: Congress had funded and authorized the Wallisville project separately from the Trinity River project.⁹⁰ The court also decided the nexus issue, noting that the Wallisville Dam was a "separate viable entity."⁹¹

83. The court sought to determine whether any federal approval, statute or regulation mandated that the highway be "funded as an unit, viewed as an unit or approved as an unit." *Id.* at 1381.

84. The court rejected the argument that a letter written by the Federal Highway Administrator to the Chairman-Director of the Maryland State Roads Commission constituted approval of the alleged program, because the letter merely approved a systems modification and did not impose any obligation on the federal government. *Id.*

85. *Id.* at 1384. "In some situations the relationship of several roads . . . may be so interrelated that no one road can function . . . except in conjunction with others." *Id.*

86. 499 F.2d 982 (5th Cir. 1974), *rev'g* *Sierra Club v. Froehlke*, 359 F. Supp. 1289 (S.D. Tex. 1973).

87. 499 F.2d at 985. The Wallisville project had appropriations totaling less than 2% of the cost of the Trinity River project. *Id.*

88. 359 F. Supp. at 1384-85.

89. *Id.* at 1385.

90. *Sierra Club v. Callaway*, 499 F.2d 982, 987 (5th Cir. 1974).

91. *Id.* at 990.

The two opinions in the *Callaway* case illustrate both the strength and weakness of the courts' inquiry into nominal considerations and nexus. By enabling the courts to make a comprehensive, case-by-case determination of the scope of the proposed federal project and its relationship to a program, the inquiry risks submerging the courts in a sea of facts. Moreover, although the 2-tiered test prompts courts to focus on the explicit nominal considerations and implicit nexus factors in ascertaining the scope of the program EIS requirement, the test fails to require the courts to evaluate the findings in any systematic manner.

3. *Practical considerations.*

The *Callaway* decision assumes added importance because of the Fifth Circuit's indication that practical necessity may justify dividing a network of projects into its component parts.⁹² Although the court based its decision on the absence of a sufficient interrelationship between the projects,⁹³ its injection of practical considerations⁹⁴ suggests another important factor in determining the scope of an EIS. If practical considerations are to provide guidance in the development of a program EIS standard, the courts must identify relevant considerations and assign appropriate burdens of proof.

B. *A Case History Illustrating the Problem of Drafting a Judicial Standard: Kleppe v. Sierra Club*

By 1975, several circuits recognized the validity of the program EIS requirement.⁹⁵ That recognition alone, however, did not yield a

92. *Id.* at 987. The court cited *Indian Lookout Alliance v. Volpe*, 484 F.2d 11 (8th Cir. 1973), to support its position. In *Indian Lookout*, the plaintiff objected to the Department of Transportation's preparation of an EIS covering only a 14-mile highway segment and instead sought a program EIS for a 1,878-mile interstate highway. In ruling for the Department, the court focused on the practicalities of drafting plaintiff's requested EIS. *Id.* at 18-19. The court attempted to strike a balance between the need for comprehensive environmental evaluation of the entire program and the difficulty of drafting an EIS for such an undertaking. Noting that the proposal to build the entire 1,878-mile stretch was very tentative, the court concluded that it would be impractical to hold up the 14-mile segment while an extensive, time-consuming study was made for the indefinite overall plan. *Id.* at 19. *Indian Lookout* was the first case in which a court weighed NEPA's environmental goals against the practical and administrative difficulties of drafting an EIS.

93. See text accompanying notes 90-91 *supra*.

94. 499 F.2d at 987.

95. The Fifth, Eighth, Ninth, and Tenth Circuits had conceded the validity of the program EIS requirement, see *Cady v. Morton*, 527 F.2d 786, 795 (9th Cir. 1975); *Sierra Club v. Stamm*, 507 F.2d 788, 792-93 (10th Cir. 1974); *Sierra Club v. Callaway*, 499 F.2d 982, 987 (5th Cir. 1974); *Minnesota Pub. Interest Research Group v. Butz*, 498 F.2d 1314, 1322-23 n.29 (8th Cir. 1974), although the District of Columbia Circuit had been the primary enforcer

consistent, all-purpose test for determining the scope of the program EIS requirement. The decision of the Court of Appeals for the District of Columbia and the United States Supreme Court's reversal of that decision in *Kleppe v. Sierra Club*⁹⁶ merit special attention, because they manifest the major defect in the present judicial approach to the scope of the program EIS requirement: Two courts, viewing the same facts and applying similar tests, reached completely opposite results.

1. *The background.*

For decades, private entities have mined coal with governmental approval in the Northern Great Plains, an area encompassing parts of North and South Dakota, Wyoming and Montana. The region has large deposits of high-grade coal located primarily upon public lands.⁹⁷ The Arab oil embargo triggered a dramatic increase in private demand for federal mining leases and permits to mine these deposits.⁹⁸

Recognizing the need for environmental analysis, the Secretary of the Interior ordered a comprehensive federal-state interagency study of the social, environmental and economic consequences of expanded coal mining in the region.⁹⁹ This study became known as the Northern Great Plains Resources Program (NGPRP).¹⁰⁰ Concern about the development of a national coal-leasing policy also prompted the Secretary to order a moratorium on further leasing pending the formulation of a national coal program.¹⁰¹ Finally, the Secretary curtailed federal approval of any coal-related activity in the Northern Great Plains until issuance of the NGPRP interim report.¹⁰²

Despite these restrictions, loopholes enabled some mining to proceed.¹⁰³ The Sierra Club brought suit against the Department of the Interior and several other federal agencies to bar further federal coal-related actions in the region until preparation of a program

of the program EIS requirement, *see* *Scientists' Inst. for Pub. Information v. AEC*, 481 F.2d 1079, 1088 (D.C. Cir. 1973).

96. 427 U.S. 390 (1976), *rev'g* *Sierra Club v. Morton*, 514 F.2d 856 (D.C. Cir. 1975).

97. 514 F.2d at 861 n.1.

98. *Id.* at 862.

99. *Id.* at 862-63.

100. *Id.* at 863.

101. *Id.* The moratorium allowed some leasing under certain circumstances but totally suspended issuance of coal prospecting permits. *Id.* at 864-66.

102. *Id.* at 864.

103. For example, the short-term leasing program was suspended only for new leases

EIS. Unsuccessful in the district court,¹⁰⁴ the Sierra Club appealed. Finding that the facts evinced a contemplated regional plan of development that might require preparation of a program EIS,¹⁰⁵ the court of appeals reversed the district court's opinion and remanded the case.¹⁰⁶ The United States Supreme Court reversed the court of appeals' decision, holding that no program EIS was required.¹⁰⁷ The following analysis of the appellate and Supreme Court opinions points out the defects in each individual court's

and not for the mining plan of preexisting leases. Similarly, federal activity such as outstanding but nonoperational leases on Indian lands was not suspended in the Northern Great Plains but could continue with approval of the Under Secretary of the Interior. The leasing moratorium included other miscellaneous exceptions such as lease issuances for coal needed as a reserve for future production. *Id.* at 864-65.

These loopholes allowed extensive coal development. For example, before the "moratorium," the Department of Interior had approved plans for 29 leases, only half of which were operational at the time of the moratorium. These nonoperating mines could begin operation despite the moratorium. *Id.* at 865.

104. *Sierra Club v. Morton*, 421 F. Supp. 638 (D.D.C. 1974).

105. *Sierra Club v. Morton*, 514 F.2d 856, 878 (D.C. Cir. 1975) (Skelley, J., for a 2-1 majority).

106. The court of appeals was unable to determine whether the action was sufficiently ripe to require preparation of the program EIS. *Id.* at 879-81. To determine the ripeness issue, the court applied the 4-part balancing test first enunciated in *Scientists' Inst. for Pub. Information v. AEC*, 481 F.2d 1079 (D.C. Cir. 1973). There the court required an EIS covering the entire research and development program for the Liquid Metal Fast Breeder Reactor. Recognizing that an EIS must be written late enough in the development process to contain significant information but early enough for the information to serve as an input into the decisionmaking process, the court identified four specific factors for determining whether the time was ripe for preparation of an EIS: (1) whether commercial implementation of the technology involved was more than speculative; (2) to what extent "meaningful" information on the environmental impact of development of the program existed; (3) to what extent irretrievable commitments of resources were taking place in the program; and (4) the severity of the anticipated environmental effects of the program. *Id.* at 1096-98. The court failed to specify the relative weights accorded to these factors, however, and did not explain what result would ensue if one or two of the factors were missing.

The circuit court in *Kleppe* could not obtain conclusive evidence on two of the factors, and consequently was unable to reach a decision on timing. The court found evidence demonstrating that the technology involved was more than speculative and that meaningful information on the effects of development of the program existed, thereby indicating that the time was ripe for preparation of a program statement. 514 F.2d at 880. But the court found only inconclusive evidence of the extent to which irretrievable commitments of resources were taking place in the program and of the severity of the anticipated effects of the program. *Id.* at 881. Thus, the court remanded the issue to the district court, pending issuance of the interim interagency report expected to determine the government's role and thus make preparation of the program EIS appropriate. *Id.* at 881-82.

The Supreme Court's severe criticism of the 4-part balancing approach as an unjustified judicial interpretation of NEPA settles any question of the validity of this approach. See *Kleppe v. Sierra Club*, 427 U.S. 390, 406 (1976), *rev'g* *Sierra Club v. Morton*, 514 F.2d 856 (D.C. Cir. 1975).

107. 427 U.S. 390, 399 (1976).

inquiry into logical nexus and nominal considerations as well as the defects in this 2-tiered inquiry that allow two appellate courts reviewing the same facts to reach completely opposite conclusions.

2. *Nominal considerations.*

Both appellate courts examined whether the defendant federal agencies had employed the concept of a regional program sufficiently in their planning process to demonstrate the existence of a program for which the agencies must prepare an EIS.¹⁰⁸ The court of appeals held that a program existed because past governmental attempts to formulate a concrete plan of development evidenced a federal plan for coordinated development of the region.¹⁰⁹ There was little support for this conclusion. The court's recognition that the government's exact role and the exact geographical area to be affected were uncertain¹¹⁰ illustrates the tentativeness and lack of definition of the regional plan.¹¹¹

The Supreme Court rejected the court of appeals' finding that nominal considerations dictated the existence of a program. The Court found that there was no evidence in the record of "an action or a proposal for an action of regional scope."¹¹² All the proposals were for actions of either local or national scope, and EIS's had been prepared on those levels. Because no proposals for a regional plan existed, no regional EIS was required.¹¹³

108. See note 83 *supra* and accompanying text.

109. 514 F.2d at 878. Among the items the circuit court considered in reaching its conclusion were: (1) the Department of the Interior's recognition of the need for coordinated regional development; (2) three federally sponsored studies of energy production and resource development in the region; and (3) the voluntary efforts by the Secretary of the Interior to curb activity in the Northern Great Plains pending issuance of the NGPRP interim report. *Id.* at 875-78.

The court rejected the views of both the district court and the defendants. The district court found that because the Northern Great Plains coal development was not defined as a program by statute or clear executive or administrative action, no program existed. *Sierra Club v. Morton*, 421 F. Supp. 638, 646 (D.D.C. 1974). The defendants urged an even narrower nominal considerations test. In their view, a program could not exist unless the agency itself designated its activities as such. 514 F.2d at 873.

In rejecting the district court's view as too narrow, the court of appeals stated: "At a minimum courts must reserve the right to analyze federal actions to determine if, in fact, a comprehensive program, *however labeled*, is under way or proposed." *Id.* at 873 (emphasis added).

The court explicitly rejected the test proffered by the defendants, noting that such a test would render judicial review meaningless because it would vest the agency with complete authority to determine the existence of a program that necessitated preparation of an EIS. *Id.*

110. 514 F.2d at 881.

111. See 1976 B.Y.U. L. REV. 335, 345.

112. 427 U.S. at 400.

113. *Id.* at 399. The Court failed to distinguish between the scope implications and the

The Court's emphasis on a proposal indicates that the only nominal consideration a court should entertain is whether the implementing agency has delineated the contours of a program in a formal document. This interpretation presumably would require a court to ignore previously employed nominal considerations, such as congressional funding.¹¹⁴ More importantly, this narrow view of nominal considerations suggests that agencies need not prepare EIS's on de facto programs not originated from formal proposals. The formalism of the Supreme Court's emphasis on a proposal will encourage agencies seeking to avoid compliance with NEPA to plan informally.¹¹⁵

Neither opinion indicates the nominal factors a court should examine to discern if a regional program existed. Without such direction, courts may continue randomly to select nominal considerations supporting their predilections for or against the program EIS requirement.¹¹⁶ The Court's failure to define a "proposal"

timing implications of its insistence on a regional proposal as a precondition to a regional EIS. The possible scope basis for the Court's decision is that because the existing proposals delineated only a national program and local actions, no regional program existed for which the agencies needed to prepare a regional EIS. The possible timing basis for the Court's decision is that regardless of whether a regional program existed, the absence of a regional proposal established that the agency had not yet taken an action making a regional EIS "ripe." See notes 4 & 106 *supra*.

114. See note 90 *supra* and accompanying text. This narrow view of nominal considerations eliminates any designation of the contours of a program by a governmental body outside the implementing agency. See notes 142-44 *infra* and accompanying text.

115. Agencies often make decisions through informal channels without the existence of a concrete proposal. See generally A. DOWNS, *INSIDE BUREAUCRACY* 112-31 (1967). In addition, agencies often take actions as a result of policy recommendations that are not explicitly articulated in a formal document but rather are a part of a "blurred dialectic of politics and facts." Anderson, *supra* note 9, at 315. The Court's narrow view of nominal considerations requires that when a plaintiff challenges the implementation of a project because the project is part of a larger program for which the agency has not prepared an EIS, the plaintiff must adduce evidence of a concrete proposal delineating the project as part of a program. Evidence demonstrating that the agency has created a program informally, without the benefit of a proposal, is insufficient. Thus, the narrow view of nominal considerations will encourage informal operation by agencies seeking to avoid NEPA's requirements.

116. Courts holding that no program EIS was required either have premised their decision on the lack of a formal proposal, see *Aberdeen & Rockfish R.R. v. Students Challenging Regulatory Agency Procedures (SCRAP)*, 422 U.S. 289, 320 (1975); note 134 *infra*, or have failed to examine nominal considerations as support for their holdings, see *Trout Unlimited v. Morton*, 509 F.2d 1276, 1285 (9th Cir. 1974); *Sierra Club v. Stamm*, 507 F.2d 788, 792-93 (10th Cir. 1974). Those courts ordering preparation of broader EIS's than the agencies were willing to provide have looked at nominal considerations closely, examining an agency's own rules and regulations, see *Minnesota Pub. Interest Research Group v. Butz*, 358 F. Supp. 584, 623 (D. Minn. 1973), *aff'd*, 498 F.2d 1314 (8th Cir. 1974), the current state of planning in the agency, see *Indian Lookout Alliance v. Volpe*, 484 F.2d 11, 19-20 (8th Cir. 1973), or the planning history of the projects, *Sierra Club v. Froehle*, 359 F. Supp. 1289,

perpetuates courts' wide discretion in determining whether nominal considerations dictate preparation of a program EIS.¹¹⁷

3. *Logical nexus.*

The findings. Both courts supplemented their nominal considerations analysis with an examination of whether a logical nexus existed among federal coal activities in the region. The court of appeals found such a nexus, disagreeing with the district court's finding¹¹⁸ that there was no evidence of interrelationship among the various activities of the federal government in the Northern Great Plains.¹¹⁹ As evidence of interrelationship it found that the finite supply of water and manpower limits the number of coal mines that could be developed in the Northern Great Plains.¹²⁰

Conversely, the Supreme Court determined that no significant nexus existed among the coal-related projects in the Northern Great Plains. The Court did concede that an agency must prepare a program EIS when several proposals pending concurrently before an agency will have a cumulative or synergistic environmental impact upon a region.¹²¹ The Court declared, however, that absent a showing of arbitrary action, it must uphold the Department of Interior's decision that the proposed actions in the Northern Great Plains did not have a sufficiently significant cumulative environmental effect to require preparation of a program EIS.¹²²

1315 (S.D. Tex. 1973), *rev'd sub nom.* *Sierra Club v. Callaway*, 499 F.2d 982 (5th Cir. 1974). See Comment, *supra* note 20, at 827 n.109.

117. The Court declared that NEPA does not require a comprehensive EIS on "contemplated" federal projects in the region but only on "proposed" actions. NEPA "does not require an agency to consider the possible environmental impacts of less imminent actions when preparing the impact statement on proposed actions." 427 U.S. at 410 n.20. The Court, however, failed to provide guidance to the lower courts regarding the difficult task of distinguishing between a "contemplated" federal action and a "proposed" action. Thus, the Court's insistence on a proposal provides limited guidance to courts and agencies in determining the proper scope of the program EIS requirement. Council on Environmental Quality, Memorandum on *Kleppe v. Sierra Club and Flint Ridge Dev. Co. v. Scenic Rivers Ass'n of Okla.* (Sept. 1976), *reprinted in* 102 MONITOR, Sept. 1976, at 11, 21.

118. 421 F. Supp. at 644-45.

119. "It is our view that when the federal government, through exercise of its power to approve leases, mining plans, rights-of-way, and water option contracts, attempts to 'control development' of a definite region, it is engaged in a regional program constituting major federal action within the meaning of NEPA, whether it labels its attempts a 'plan,' a 'program,' or nothing at all." 514 F.2d at 878.

120. *Id.* at 877 n.28.

121. 427 U.S. at 410.

122. *Id.* at 412 (The decision whether to produce a regional EIS "requires a high level of technical expertise and is properly left to the informed discretion of the responsible federal agencies.").

The weaknesses. There are serious weaknesses in both courts' analysis of nexus. The court of appeals based its finding of nexus on the dynamics of development. This basis for nexus is insufficient for two reasons. First, the dynamics of development are not unique to the Northern Great Plains but support preparation of a program EIS for any region that is developing its resources. Second, the court of appeals ignored the vast scope of the interrelationship; in finding a program that required an EIS, the court lumped together 15 activities of nine federal agencies¹²³ engaged in over a period of almost 60 years¹²⁴ and covering at least 90,000 square miles.¹²⁵

The Supreme Court's nexus analysis is also defective for two reasons. First, the Court's statement that agencies preparing EIS's need only consider the necessity of preparing program EIS's when interrelated projects are pending concurrently is unsatisfactory because it would not permit courts to order EIS's for entire programs when a proposal before an agency concerns only one portion of a massive undertaking.¹²⁶ For example, an agency may plan to fund construction of a river control system but only propose to construct individual dams at staggered time intervals. *Kleppe* would require an EIS covering only the proposed construction and not an EIS on the entire system, because the projects would not be pending concurrently.¹²⁷

More importantly, the Court's handling of nexus is inconsistent with the policy implicit in NEPA that the only way to compel reluctant agencies to undertake sound environmental planning is to require them to explore, consider and publicly describe the adverse

123. 421 F. Supp. at 640-41. For example, the Department of Agriculture has jurisdiction over the issuance of rights-of-way over lands within the national forests in the Northern Great Plains, and the Army Corps of Engineers has jurisdiction over the navigable rivers in the area. 514 F.2d at 864.

124. Since 1920, the federal government has maintained control over the coal lands in the region through leasing, instead of selling, them. 514 F.2d at 863 n.5.

125. The 14 mining leases in operation at the time of the suit covered a total of 90,000 square miles. *Id.* at 862 n.4.

126. The *Kleppe* approach would invalidate the holding in *Atchison, Top. & S.F. Ry. v. Callaway*, 382 F. Supp. 610, 620-22 (D.D.C. 1974), in which the court ordered preparation of a comprehensive EIS, even though only one project was pending, because the proposed expansion of one dam and locks on the Upper Mississippi River System would necessitate further expansion of other dams and locks in the system.

127. The stage of development of the proposals concerning the related projects is irrelevant; the important consideration is whether the contemplated projects are sufficiently clarified so that the program EIS can provide significant information to the decisionmaker and the public. McGarity, *supra* note 38, at 886.

environmental effects of broadly based actions.¹²⁸ The Court's reliance on the defendant agency's "expertise" to determine their NEPA obligations ignores recent evidence of agencies' resistance to change, their lack of familiarity with environmental problems and the importance of societal values, as well as technical expertise, in the EIS process.¹²⁹ Without the imposition of a uniform judicial standard, preparation of program EIS's will follow a haphazard pattern according to each agency's disposition toward the program EIS requirement. The impact of the Court's deference to agency expertise, however, will remain unclear because, although the Court said that courts may reverse only arbitrary action, lower courts may vary in what they find to be arbitrary.¹³⁰

4. *Practical considerations.*

In addition to the two factors considered by the circuit court—nominal considerations and logical nexus—the Supreme Court took a third factor—practical considerations—into account.¹³¹ The Court stated that when no regional plan defining the scope and limits of the proposed development of the region exists, the agency would not possess the necessary "factual predicate" for an EIS of the type envisioned by NEPA and could produce only estimates of potential development and attendant environmental consequences.¹³² The Court's opinion, however, does not inform agencies or lower courts whether other "practical reasons" besides lack of a "factual predicate" qualify for consideration or how much weight practical considerations merit.¹³³ This ambiguity could lead to circumvention of the program EIS requirement, because agencies and courts simply could recite the practical reasons against requiring preparation of a program EIS without specifying which one or ones tipped the balance.

128. See notes 9–10 *supra* and accompanying text.

129. *NEPA Off the Top*, *supra* note 45, at 10,167. See generally Leventhal, *supra* note 27, at 523–24.

130. See note 75 *supra*.

131. *Kleppe v. Sierra Club*, 427 U.S. 390, 401 (1976).

132. *Id.* at 402.

133. For example, agencies often argue that further compliance with NEPA will delay implementation of projects. See *Greene County Planning Bd. v. Federal Power Comm'n*, 455 F.2d 412, 422–23 (2d Cir.), *cert. denied*, 409 U.S. 849 (1972); *Calvert Cliffs' Coordinating Comm., Inc. v. AEC*, 449 F.2d 1109, 1122, 1128 (D.C. Cir. 1971). The Supreme Court's opinion leaves open the possibility that courts should take such considerations into account. For an analysis of the appropriate weight of practical considerations, see notes 159–64 *infra* and accompanying text.

C. *Courts and Agencies: Attempting to Comply with the Program EIS Requirement Without a Workable Standard*

The uncertainty that accompanies attempted compliance with the program EIS requirement has significant repercussions, both for agencies and reviewing courts.¹³⁴ Because the Supreme Court's deference to agency discretion¹³⁵ reinforces the general judicial deference to agency discretion on matters outside judicial expertise, an agency's resolution of the scope of an EIS may in practice be unassailable. Without an operable standard for agencies to follow, and for courts to enforce, agency compliance with NEPA will be, at best, fortuitous.¹³⁶ In Part IV, this Note proposes a formula for a consistent standard under which agencies and courts can define the scope of the program EIS requirement.

IV. A 3-STEP TEST TO DETERMINE THE SCOPE OF THE PROGRAM EIS REQUIREMENT

The preceding analysis of the development of the program EIS requirement from the enactment of NEPA to *Kleppe v. Sierra Club*¹³⁷ underscores the need for a new standard defining the scope of the program EIS requirement. This new standard should prompt courts, despite initial predilections, to dispose of the clear cases with uniform results and approach the close cases with consistent logic.

The courts' supervision of agency action should encourage compliance with NEPA without disrupting the routine decisionmaking processes of the agencies.¹³⁸ Moreover, the courts should recognize the limits of the EIS requirement. Section 102(2)(C) requires

134. Although the Supreme Court's opinion in *Kleppe* provides courts with a means of justifying their decisions, it contributes little to the development of a consistent, reasoned approach to the scope of the program EIS requirement. Since the Supreme Court decided *Kleppe*, two district courts have relied on the absence of a specific proposal to reject the argument that the scope of a proposed EIS was too narrow. *Colorado Pub. Interest Research Group, Inc. v. Hills*, 420 F. Supp. 582, 586 (D. Colo. 1976); *United Family Farmers, Inc. v. Kleppe*, 418 F. Supp. 591, 597 (D.S.D. 1976). Similarly, the Ninth Circuit rejected an argument that the scope of a proposed EIS was too narrow and decided that, in the absence of a regional development plan, the broader environmental consequences were too "remote." *Sierra Club v. Hodel*, 544 F.2d 1036, 1040-41 (9th Cir. 1976).

135. See note 122 *supra* and accompanying text.

136. Agencies continue to express a need for guidance in determining how to apply the program EIS requirement. See *Hearings on Oversight of the National Environmental Policy Act of 1969 Before the Subcomm. on Fisheries and Wildlife Conservation and the Environment of the House Comm. on Merchant Marine and Fisheries*, 94th Cong., 1st Sess. 34, 40 (1975).

137. 427 U.S. 390 (1976).

138. The Supreme Court in *Kleppe* described judicial involvement in the day-to-day

only a report setting out data and analysis on specified aspects of a particular proposal.¹³⁹

To achieve a consistent judicial response to the question of what federal activities the program EIS requirement covers, this Note proposes a 3-step test that employs reformulated versions of the criteria with which the courts have wrestled. This test enables courts to define the program EIS requirement more succinctly and to determine whether agency action complies with this requirement.¹⁴⁰

The first two criteria, nominal considerations and logical nexus, identify which federal activities constitute a program. The third criterion, administrative practicality, enables courts to limit the EIS requirement to those programs for which the agency can obtain and provide useful information. Unlike previous judicial schemes using these same labels, this 3-step test requires courts to proceed in a comprehensive, step-by-step manner.

A. *The First Criterion: Nominal Considerations*

The first step of the proposed test would require the court to determine whether evidence of nominal considerations exists.

decisionmaking process of the agencies as an evil courts should seek to avoid. *Id.* at 406. NEPA designates the agencies, not the courts, as the environmental decisionmakers. See Murphy, *The National Environmental Policy Act and the Licensing Process: Environmentalist Magna Carta or Agency Coup de Grace*, 72 COLUM. L. REV. 963, 1006-07 (1972). Although both agencies and courts lack environmental expertise, and although undue deference to the agencies may be harmful, see notes 128-30 *supra* and accompanying text, the agencies nonetheless are better equipped than the courts to strike a political balance between protection of the environment and concern for administrative feasibility. See Oakes, *Environmental Litigation: Current Development and Suggestions for the Future*, 5 CONN. L. REV. 531, 554-56 (1973); *Four Years of EIS's*, *supra* note 45, at 563.

139. Comment, *supra* note 4, at 131. The dual purposes of the EIS requirement are to provide agencies with a document containing relevant environmental information for consideration during the decisionmaking process and to inform the public of the environmental consequences of and alternatives to proposed agency actions. See notes 36-37 *supra* and accompanying text. An EIS cannot perform these reporting functions if the courts use it to determine whether an agency decision is consistent with NEPA. Agencies will prepare EIS's that are justification papers, reporting only the environmental considerations that support their decisions. In addition, courts can erode the EIS requirement if they order preparation of excessively broad EIS's. An EIS will not contribute significant information to the decisionmaker and the public if the subject of environmental analysis is too broad or insufficiently distinct. See notes 159-64 *infra* and accompanying text. An example of an insufficiently distinct subject of environmental analysis is the impact of the existing structure of railway freight rates on the use of virgin materials and recyclable materials. See *Aberdeen & Rockfish R.R. v. Students Challenging Regulatory Agency Procedures (SCRAP)*, 422 U.S. 289 (1975).

140. This Note does not discuss the proper standard of review for courts implementing the 3-step test. It suggests, however, that courts should use the rigorous standard of "reasonableness" rather than the "arbitrary and capricious" standard to evaluate procedural compliance with NEPA. Most courts faced with this question have applied the "reasonable-

Either internal or external designations of a program would satisfy this criterion. An internal designation occurs when the agency having responsibility for the program delineates the contours of the program. A formal paper covering a group of the agency's activities or documentation that the agency handles certain activities as a group in either the planning or decisionmaking stage are illustrations of internally designated nominal considerations.¹⁴¹ By contrast, an external designation occurs when a federal authority other than the implementing agency delineates the contours of a program by taking some action with respect to that program. Examples of external designation include congressional funding of a group of interrelated projects as a unit,¹⁴² executive delegation of responsibility for a group of activities to an agency¹⁴³ and previous judicial action linking agency activities.¹⁴⁴

The proposed test would require the court to determine first, whether any evidence of internal designation exists, and second, whether any evidence of external designation exists.¹⁴⁵ A finding of internal designation of a program would create a presumption that the program requires an EIS. If the court makes such a finding, it

ness" standard. *See* note 75 *supra*.

141. A good source for such documentation is the agency guidelines defining agency actions to which NEPA will apply. *See* Anderson, *supra* note 9, at 342. The Federal Highway Administration, for example, promulgated guidelines that have supplied the criterion of "logical functional termini," defined as "major crossroads, population centers, major traffic generators or similar major highway control elements," *Indian Lookout Alliance v. Volpe*, 484 F.2d 11, 18 (8th Cir. 1973), to determine the length of highway requiring EIS treatment. *See, e.g., Swain v. Brinegar*, 542 F.2d 364, 369 (7th Cir. 1976) (en banc); *Daly v. Volpe*, 514 F.2d 1106, 1109 (9th Cir. 1975). In several cases, an agency has denied the application of NEPA to a particular action, only to find that its guidelines called for impact statement preparation. *See, e.g., National Helium Corp. v. Morton*, 455 F.2d 650, 656 (10th Cir. 1971); *Silva v. Romney*, 342 F. Supp. 783, 785 (D. Mass. 1972). *See also Hiram Clarke Civic Club, Inc. v. Lynn*, 476 F.2d 421 (5th Cir. 1973).

142. One basis for the court's holding in *Sierra Club v. Callaway*, 499 F.2d 982 (5th Cir. 1974), that a program EIS was not required was separate congressional authorization and funding of the two projects. *Id.* at 987.

143. An example of executive delegation is actions by the Secretary of Transportation pertaining to the length of highway that the Federal Highway Administration should fund. *See Named Individual Members of San Antonio Conservation Soc'y v. Texas Highway Dept.*, 446 F.2d 1013, 1023 (5th Cir. 1971); *Citizens Against Mass Transit v. Brinegar*, 357 F. Supp. 1269, 1284 (D. Ariz. 1973).

144. In judging whether an action constitutes a major federal action under NEPA, courts have compared the relative magnitudes of projects already held to be sufficiently important to require an EIS. *See Sierra Club v. Hardin*, 325 F. Supp. 99, 125 n.52 (D. Alas. 1971); *Environmental Defense Fund, Inc. v. Corps of Eng'rs*, 325 F. Supp. 728, 744 (E.D. Ark. 1971). Similarly, courts should compare previous holdings implementing the proposed 3-step test and concerning similar activities of the defendant agency with the alleged program in the pending case.

145. An important contribution of this systematic analysis is consistency. Knowing that

should proceed directly to the last step to determine whether the administrative practicality of preparing the program EIS rebuts this presumption. If the court finds no evidence of internal designation but does find evidence of external designation, it should proceed to the second step to determine whether the projects' logical nexus is sufficient to support the program designation.

B. *The Second Criterion: Logical Nexus*

The second step of the test would require the court to evaluate the relationship between various projects alleged to constitute a program. The court would determine whether the links between the projects are strong enough to justify a presumption that the aggregation of projects constitutes a program requiring an EIS. The nexus inquiry would focus on three factors: the dependent utility of the projects, the duplication of basic policy questions and the presence of geographical ties among the projects.

1. *Dependent utility.*

Interdependence among federal actions designed to achieve a common purpose constitutes evidence of the existence of a program.¹⁴⁶ For example, if a dam will provide some localized service but the area needs other levees and other dams to attain the requisite level of flood control and energy production, the agency should prepare a program EIS covering the interconnected projects. The inquiry into dependent utility would provide beneficial guidance to agencies in less complex cases¹⁴⁷ in which projects clearly have a

courts will explore nominal considerations in a more systematic manner may lead agencies to examine the files of a proposed action in search of either internal documentation of a program or outside manifestation of the contours of a program. See *Four Years of EIS's*, *supra* note 45, at 563. The resultant increase in agency adherence to the program EIS requirement will reduce environmental litigation. See COUNCIL OF ENVIRONMENTAL QUALITY, *supra* note 45, at 3, reprinted in 102 MONITOR, June 1976, at 3, 6.

146. A test similar to dependent utility is the "irreversible commitment" test. This test considers whether the delay in the preparation of a program EIS presents the danger that current action will alter the balance between environmental and economic interests. Once the initial steps are undertaken, the current action may preclude a meaningful evaluation of the program in the future. *Scientists' Inst. for Pub. Information v. AEC*, 481 F.2d 1079, 1089 (D.C. Cir. 1973). See *Coalition for Safe Nuclear Power v. AEC*, 463 F.2d 954, 956 (D.C. Cir. 1972); *United Family Farmers, Inc. v. Kleppe*, 418 F. Supp. 591, 597 (D.S.D. 1976). The question of whether the first step compels the agency to take subsequent action is virtually identical to the question of whether a project can accomplish its objective without the completion of other projects. See Note, *supra* note 37, at 113.

147. In *Atchison, Top. & S.F. Ry. v. Callaway*, 382 F. Supp. 610 (D.D.C. 1974), dependent utility provided a basis for requiring a broader EIS. The Army Corps of Engineers sought to reconstruct one of 29 locks and dams that made commercial traffic possible on the

common purpose. Cases presenting complex relationships reduce the precision of the dependent-utility inquiry as an indicium of nexus.¹⁴⁸ Yet, when the components have important interdependencies and external designation of a program exists, the burden of demonstrating the infeasibility of a program EIS should shift to the agency resisting the preparation of a program EIS.

2. *Duplication of basic policy questions.*

Evidence that individual project EIS's require duplicative reconsideration of broad policy questions constitutes evidence of a program.¹⁴⁹ The decision in *Movement Against Destruction v. Volpe*¹⁵⁰ illustrates the need for such an inquiry. After concluding that NEPA did not require the preparation of an EIS for a network of highways, the court declared that the EIS for each segment of the network must assess more than the environmental impact of that particular segment.¹⁵¹ Such a requirement engenders repetitive discussion of the broader environmental questions.¹⁵² A more reasonable and efficient scheme would require a program EIS discussing the common environmental questions prior to commencing construction of the network. Subsequent project EIS's would supplement the program EIS by focusing on the environmental effects of the individual segments. Thus, the presence of common environmental policies provides a significant rationale for joining projects into a program and subjecting them to NEPA requirements.¹⁵³ The effectiveness of this approach would be greatest in programs with complex interrelationships among the component projects. The

Upper Mississippi River and the Illinois waterway. Because the reconstruction of this first dam and lock was the logical first link in a chain of contemplated actions designed to increase tonnage on the waterways, the court held that the Corps must prepare an impact statement analyzing the effects of increased traffic and reconstruction on the entire system.

148. See notes 80–81 *supra* and accompanying text.

149. A primary advantage of a program EIS is the assessment of recurring policy issues. See *Natural Resources Defense Council, Inc. v. Morton*, 388 F. Supp. 829, 839 (D.D.C. 1974); *Natural Resources Defense Council, Inc. v. TVA*, 367 F. Supp. 122, 126 (E.D. Tenn. 1973). A court should scrutinize the actions that plaintiffs claim form a program to determine whether the same policy questions will arise each time the agency prepares an EIS on one of the individual actions.

150. 361 F. Supp. 1360 (D. Md. 1973).

151. *Id.* at 1385.

152. If each individual EIS had discussed "the total environmental impact that would result from the use of the road or segment under consideration if and when used in connection with other segments or roads, already built or proposed to be built," *id.*, then each EIS would have repeated an assessment of the cumulative environmental impact of the entire highway system.

153. For example, the broad environmental questions caused by renovation of an entire

analysis of common policy issues in a program EIS would ensure the consideration of those issues and also enable the project EIS's to concentrate fully on the particular issues that the individual project presents.¹⁵⁴

3. *Geographical ties.*

A geographical relationship among projects is evidence that the projects constitute a program.¹⁵⁵ For example, a series of actions may focus on a natural resource, such as a river,¹⁵⁶ or upon a particular geographic region.¹⁵⁷ In employing this nexus factor to define the scope of a program for EIS purposes, courts should examine whether the allegedly associated components are located in a single, identifiable area, whether the area is sufficiently contained to create a strong interrelationship among the activities, and whether the activities might have an area-wide impact.¹⁵⁸

If the court finds an external designation in the first step, then a finding of one of these three factors—dependent utility, duplication of basic policy questions, or geographical ties—would be sufficient to create a presumption that the agency must prepare a program EIS. If the court does not find an external designation, then a finding of two of these three factors would be sufficient to create a presumption favoring program EIS preparation. A finding of an external designation and no logical nexus or a finding of no nominal considerations and none or one of the nexus factors should end the

waterway system arise in each project EIS on the renovation of individual dams and locks. *See* Atchison, Top. & S.F. Ry. v. Callaway, 382 F. Supp. 610 (D.D.C. 1974). Similarly, the broad environmental issues underlying the Tennessee Valley Authority (TVA) coal purchases arise each time the TVA awards an individual coal term contract. A program EIS enables the TVA to address these wider questions more comprehensively and efficiently than does the repetition of the discussion in each related EIS. *See* Natural Resources Defense Council, Inc. v. TVA, 367 F. Supp. 122, 126–28 (E.D. Tenn. 1973).

154. *See* Natural Resources Defense Council, Inc. v. Morton, 388 F. Supp. 829, 838–39 (D.D.C. 1974); note 10 *supra* and accompanying text.

155. The Supreme Court in *Kleppe* recognized the concept of geographical ties by noting with approval the Secretary of the Interior's plans to prepare impact statements on the cumulative effects of the agency's actions in regions determined by "basin boundaries, drainage areas, areas of common reclamation problems." 427 U.S. at 411.

156. Natural resource program statements were prepared for the Souris Red River and Rainy River basins in Minnesota, North Dakota and South Dakota and on the research and development program for keeping the St. Lawrence Seaway open longer during the winter. Anderson, *supra* note 9, at 336.

157. Program EIS's were prepared on underground nuclear testing in Nevada, *see id.* and on a land use plan for Coconino National Forest in Arizona, *see* 102 MONITOR, Jan. 1973, at 22–23.

158. Segments of highways, water resource projects and urban renewal projects present examples of regional activities that require a program EIS when the cumulative effects occur,

inquiry with a ruling in favor of the agency's decision not to prepare a program EIS. Conversely, if evidence in the first two steps has created a presumption that the agency must prepare a program EIS, the court should proceed to the third step to determine whether administrative practicalities rebut the presumption raised by these findings.

C. *The Third Criterion: Countervailing Considerations of Administrative Practicality*

The third step of the proposed test would afford agencies the opportunity to rebut the presumption created in either of the first two steps. This step enables the agency resisting the preparation of a program EIS to demonstrate by a preponderance of the evidence that the practical obstacles to preparing such a statement exceed the expected environmental gains.¹⁵⁹ Practical factors such as the unavailability of relevant information and the difficulty of gathering the relevant information that does exist may restrict an agency's capability to draft an EIS that it will consider in its decisionmaking process.

1. *Unavailability of significant information.*

Requiring an agency to prepare a program EIS when the necessary information is neither known nor reasonably discoverable undermines the purpose of the EIS.¹⁶⁰ To be effective, the EIS must provide the agency with information that enables it to consider the

respectively, along a common corridor, in a common drainage system or in a common community. See Council on Environmental Quality, *supra* note 117, at 19.

159. Section 102 of NEPA contains language that justifies balancing administrative feasibility against environmental gains. That section authorizes and directs preparation of EIS's "to the fullest extent possible." Courts construing this language have required compliance with the EIS requirement unless such compliance would violate other statutory provisions under which the agency must operate. *Colorado Pub. Interest Research Group v. Hills*, 420 F. Supp. 582, 584 (D. Colo. 1976). A more sophisticated construction of the phrase recognizes that the availability and difficulty of obtaining information from which the agency can make a proper analysis of environmental impact necessarily constrict the agency's ability to comply with the EIS requirement. See notes 160-64 *infra* and accompanying text. Support for this construction exists in the Supreme Court's statement in *Kleppe* that the determination of whether an agency should prepare a regional EIS requires the weighing of a number of relevant factors including the practical considerations of feasibility. 427 U.S. at 414.

160. The District of Columbia Circuit maintains that agencies cannot shirk their NEPA responsibilities by labeling any or all discussion of future environmental effects as "crystal ball inquiries." *Scientists' Inst. for Pub. Information v. AEC*, 481 F.2d 1079, 1092 (D.C. Cir. 1973). The agency must engage willingly in "[r]easonable forecasting and speculation," an element implicit in NEPA. *Id.* The parameters of "reasonable forecasting" are unclear, however. This Note's proposed formula avoids judicial demarcation of "reasonable" and

environmental impact of a program;¹⁶¹ an EIS containing data the agency deems insignificant cannot fulfill this role. Thus, if the agency proves by a preponderance of the evidence that the available information is insignificant and that significant information is unavailable, the court should not require the preparation of the program EIS.¹⁶²

2. *The difficulty of obtaining information.*

The process of preparing a program EIS requires a substantial investment of human and monetary capital.¹⁶³ Therefore, an agency should be allowed to rebut the presumption in favor of requiring a program EIS by demonstrating that the costs of compliance would cripple its ability to function. When excessive compliance costs are traceable to the agency's prior resistance to NEPA,¹⁶⁴ however, evidence of such costs would not be sufficient to rebut the presumption. The third step of the test thus would respect the agency's decision not to prepare a program EIS when practicality indicates that the requirement can be enforced only at a disproportionate social cost.

"unreasonable" environmental prediction; instead, it either compels the plaintiff to show that the prediction will provide information concerning important cumulative impacts of the federal actions that an agency should consider in its decisionmaking, *see* notes 149-54 *supra* and accompanying text, or compels the defendant to show that, as defined, the scope of the EIS will produce speculative results, *see* note 162 *infra* and accompanying text.

161. The CEQ recognizes that availability of information regarding future actions and alternatives plays an important role in defining the scope of comprehensive environmental statements. Council on Environmental Quality, *supra* note 117, at 22.

162. In *Citizens Against the Destruction of Napa v. Lynn*, 391 F. Supp. 1188 (N.D. Cal. 1975), the court refused to broaden the scope of an EIS covering an urban renewal project. One reason why the EIS did not have to discuss the environmental consequences of redevelopment of an 8-block area as well as of a 3-block area was that there was a "total lack of evidence" as to how the expanded redevelopment would proceed. *Id.* at 1193. Although designation of the program existed, that is, the city council had adopted a redevelopment plan which included all 11 blocks within the central business area, the lack of information regarding development of the larger area dictated that a complete EIS could not be prepared.

163. "The statute [NEPA] must be construed in the light of reason if it is not to demand what is, fairly speaking, not meaningfully possible, given the obvious, that the resources of energy and research—and time—available to meet the Nation's needs are not infinite." *Natural Resources Defense Council, Inc. v. Morton*, 458 F.2d 827, 837 (D.C. Cir. 1972). *See* *Indian Lookout Alliance v. Volpe*, 484 F.2d 11, 19 (8th Cir. 1973). *Contra*, *Calvert Cliffs' Coordinating Comm., Inc. v. AEC*, 449 F.2d 1109, 1115 (D.C. Cir. 1971) ("The section 102 duties . . . must be complied with to the fullest extent, unless there is a clear conflict of statutory authority. Considerations of administrative difficulty, delay or economic cost will not suffice to strip the section of its fundamental importance.").

The direct costs of complying with NEPA are substantial. In 1973, the CEQ estimated that compliance with NEPA would impose annual, direct costs of \$65 million on federal agencies. 3 CEQ ANN. REP. 258 (1973). *See also* Comment, *supra* note 20, at 821 n.87.

164. For an example of an agency's "thoroughgoing reluctance" to comply with NEPA,

D. Summary

Whereas previous cases, such as *Kleppe v. Sierra Club*,¹⁶⁵ forced courts to make difficult decisions on an ad hoc basis, the proposed 3-step test should encourage a consistent interpretation of the scope of the program EIS requirement. In all cases a court should proceed in the systematic manner proposed in the 3-step test.

The first step is to apply the criterion of nominal considerations—internal and external designations. Proof of internal designation creates a presumption that an agency must prepare a program EIS and directs the court immediately to the third step where the agency can rebut this presumption. Proof of external designation does not create the presumption but leads the court to the second step for evidence affirming the existence of a program.

The second step requires an inquiry into three factors of logical nexus—interdependence, duplication of basic policy questions and geographical ties. Proof of external designation makes a finding of only one of these factors necessary to establish the presumption favoring program EIS preparation. Without evidence of external designation, a finding of two of these nexus factors is required to create the presumption. Creation of this presumption compels the court to proceed to the third step to determine if this presumption is rebutted. If plaintiffs cannot adduce sufficient evidence of internal designation, of logical nexus, or of external designation and logical nexus to create the presumption, then the court should decide in favor of the agency.

The third step enables the agency resisting preparation of a program EIS to demonstrate by a preponderance of the evidence that practical obstacles, such as unavailability of relevant information and difficulty of gathering the relevant information, require preparation of the program EIS at an unacceptable social cost.

V. CONCLUSION

This Note chronicles the desultory development of the program EIS requirement. Faced with little guidance from NEPA or its legislative history, courts have struggled to define and enforce the program EIS requirement. The courts' failure to develop a workable standard defining the boundaries of the program EIS requirement

see *Calvert Cliffs' Coordinating Comm., Inc. v. AEC*, 449 F.2d 1109, 1119 (D.C. Cir. 1971).
165. 427 U.S. 390 (1976).

has left agencies confused over what constitutes a program for EIS purposes. The decisions of the District of Columbia Circuit and the Supreme Court in *Kleppe v. Sierra Club*¹⁶⁶ illustrate this confusion. Neither opinion supports its decision with sufficient clarity to provide guidance to agencies or other courts attempting to understand the scope of the program EIS requirement. The 3-step test that this Note proposes compels courts to determine those federal activities that constitute a program for EIS purposes in a more logical, more consistent, more effective, and less political manner. If adopted, the proposal would provide the foundation for the development of a standard properly delineating the scope of the program EIS requirement.

166. *Id.*

NEPA PRE-EMPTION LEGISLATION: DECISIONMAKING ALTERNATIVE FOR CRUCIAL FEDERAL PROJECTS†

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For the greater part of American history the government and citizenry of the United States paid little heed to the disruption and deterioration of the natural environment. Thoughtlessly clinging to the concept of the "frontier," the Ultimate West of inexhaustible freedom, space and natural resources,¹ they viewed the world as a never-empty cornucopia to be enjoyed without the burdens of stewardship for future generations.² The immediate and exclusive appropriation of natural resources conferred great financial gain upon the taker, thus encouraging increased exploitation of "common resources."³ The Industrial Revolution, in turn, created countless tangible benefits as the products of its new technology, yet left as its by-product an unprecedented disruption of the natural environment.⁴

In the 1960's, government and citizens alike realized that the frontier perspective and industrialization had synthesized to pro-

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¹ F. Turner, *The Significance of the Frontier in American History* (1960) (academic reprint).

² One obvious example is the "slash and burn" agriculture practiced by the American settlers.

³ Hardin describes this economic phenomenon as the "problem of the commons." Briefly stated, the problem of the commons is that the co-owner of a natural resource (a forest, for example) acquires personal economic gain by his immediate consumption of the entire resource before his fellow owners (including future generations) begin to deplete the whole. In the case of the forest, the logger who clears the lumber stands to realize an enormous profit, while his fellows who delay their operations will not share in the economic value of the forest. Consequently, the forester has a financial incentive to consume everyone's share and a disincentive to forego consumption or conserve. For a more thorough discussion of the problem of the commons, see Hardin, *The Tragedy of the Commons*, 163 SCIENCE 1245 (1968).

⁴ The relationship between technological advances and environmental disruption has been described in B. COMMONER, *THE CLOSING CIRCLE* 141-42 (Bantam ed. 1972).

duce a threat to the environment of emergency proportions. The National Environmental Policy Act of 1969 (NEPA)⁵ was enacted in an attempt to remedy this deficiency.⁶ NEPA requires all federal agencies which recommend major projects having a significant impact upon the human environment to consider the environmental consequences of their actions.⁷ NEPA enforcement is accomplished through the courts.

Although NEPA was a needed response to the environmental crisis, the suitability of its prescribed procedures to all environmental disputes can be questioned. The magnitude of the environmental problem spotlights critical deficiencies in the litigation method of policing environmental controversies and often proves the courts unsatisfactory vehicles for NEPA enforcement. A mechanism which would remove environmental decisionmaking from the courts is needed where vital and large-scale federal projects are at issue.

This article recommends pre-emption legislation as the best method for resolving major environmental controversies. Pre-emption legislation is action by Congress which determines environmental disputes without resort to judicial review. Its advantages include enormous savings of time and expense, increased expertise in environmental decisionmaking, and continued public input in major federal policymaking.

I. NEPA'S MANDATE

In the words of its sponsor, Senator Henry Jackson, NEPA was designed to establish "a national strategy for the management of the human environment."⁸ As the Senator astutely observed, "[w]hat we should be doing is setting up institutions and procedures designed to anticipate environmental problems."⁹ NEPA's preamble,

⁵ National Environmental Policy Act of 1969, 42 U.S.C. §§ 4321 *et seq.* (1970).

⁶ Realizing that many of the activities causing substantial destruction of the environment are major federal projects which frequently have interstate or even national effects, Congress decided that the first target for environmental reform would be the federal agencies. At the same time, however, Congress hoped that the states might choose to emulate this federal reform. This hope has proven to be well-founded, as many states have adopted their own NEPA-type legislation. See Comment, *Emerging State Programs to Protect the Environment: "Little NEPA's" and Beyond*, 5 ENV. AFF. 567 (1976); cf. Hagman, *NEPA's Progeny Inhabit The States—Were the Genes Defective?* 7 URB. L. ANN. 3 (1974).

⁷ 42 U.S.C. § 4332(2)(C) (1970).

⁸ *Hearings on S. 1075, & S. 1752 Before the U.S. Senate Comm. on Interior and Insular Affairs*, 91st Cong., 1st Sess. 24 (1969).

⁹ *Id.* at 27.

the congressional declaration of the national environmental policy, reflects these goals.

The Congress, recognizing the profound impact of man's activity on the interrelations of all components of the natural environment, . . . and recognizing further the critical importance of restoring and maintaining environmental quality to the overall welfare and development of man, declares that *it is the continuing policy of the Federal Government*, . . . to create and maintain conditions under which man and nature can exist in productive harmony, and fulfill the social, economic, and other requirements of present and future generations of Americans.¹⁰

NEPA's most significant provision, Section 102(2)(C), directs every agency of the Federal Government to "include in *every* recommendation or report on . . . major federal actions significantly affecting the quality of the human environment, a detailed statement . . . on—(i) *the environmental impact of the proposed action*."¹¹ This provision mandated the now familiar "environmental impact statement" or EIS as an integral part of agency planning. Indeed, it requires an EIS for every major federal action.¹² In order to encourage federal agencies to "utilize a systematic, interdisciplinary approach"¹³ to environmental decisionmaking, Congress required that specific information be included in these impact statements.

The EIS must be a detailed discussion of the environmental impacts of the proposed action, including its unavoidable adverse consequences and its irreversible commitments of natural resources.¹⁴ The agency preparing a particular EIS must investigate the relationship between the short-term use of natural resources and the long-range environmental quality of the project area.¹⁵ In addition, NEPA requires that the statement provide significant information concerning possible alternative courses of action.¹⁶ Strict adherence to these procedures was intended to ensure that environmental variables would take their appropriate position amongst economic and technical variables in the agency decisionmaking process.¹⁷

¹⁰ 42 U.S.C. § 4331(a) (1970) (emphasis added).

¹¹ *Id.* at 4332(2)(C) (emphasis added).

¹² *Id.*

¹³ *Id.* § 4332(2)(A).

¹⁴ *Id.* § 4332(2)(C)(v).

¹⁵ *Id.* § 4332(2)(C)(iv).

¹⁶ *Id.* § 4332(2)(C)(iii).

¹⁷ *Id.* § 4332(2)(E).

Congress left important questions unanswered, however. It is unclear how exhaustive an environmental impact analysis must be in order to comply with the procedural requirements of NEPA.¹⁸ More importantly, NEPA fails to state how the environmental consequences revealed in the EIS must affect the decisionmaking process. The substantive sufficiency of an EIS will depend on the agency's balancing of environmental and other variables. This substantive decision will, in turn, determine whether the agency will proceed with the proposed action. Because of congressional silence, judicial review has attained critical significance in determining the requirements of substantive sufficiency.

II. SUBSTANTIVE JUDICIAL REVIEW

EIS litigation has been voluminous.¹⁹ Although a large number of cases have determined which classes of agency decisions constitute major federal actions subject to §102(2)(C)²⁰ and what procedures an agency must follow when preparing a final impact statement,²¹ few decisions have discussed the substantive sufficiency of an EIS. The general test of EIS adequacy is a two-pronged standard: one, whether all of the §102(2)(C) procedures have been met; and two, whether the substantive decision was properly within the discretion of the agency.²² The courts' application of this two-pronged test has demanded strict compliance with the procedural rules of §102(2)(C).²³ The courts recognize that NEPA is an environmental

¹⁸ See Friedman, *The Operational Impact of NEPA and Related Environmental Laws, Regulations and Orders on Mineral Operations*, 19 ROCKY MT. MIN. L. INST. 47 (1974).

¹⁹ Cf. Yarrington, *Judicial Review of Substantive Agency Decisions: A Second Generation of Cases Under The National Environmental Policy Act*, 19 S.D. L. REV. 279 (1974).

²⁰ Comment, *Evolving Judicial Standards under the National Environmental Policy Act and the Challenge of the Alaska Pipeline*, 81 YALE L.J. 1592, 1597 (1972). (Hereinafter cited as *Judicial Standards*).

²¹ See cases cited in Lynch, *Complying with NEPA: The Tortuous Path To An Adequate Environmental Impact Statement*, 14 ARIZ. L. REV. 717 (1972).

²² Cases which have utilized the two-pronged approach include *National Helium Corp. v. Morton*, 486 F.2d 995 (10th Cir. 1973), cert. denied, 416 U.S. 993 (1974); *Concerned About Trident v. Schlesinger*, 400 F. Supp. 154 (D.D.C. 1975); *Essex County Preservation Ass'n v. Campbell*, 399 F. Supp. 208 (D. Mass. 1975); *Conservation Soc. of Southern Vermont v. Secretary of Transp.*, 362 F. Supp. 627 (D. Vt. 1973); *Cape Henry Bird Club v. Laird*, 359 F. Supp. 401 (D. Va. 1973), *aff'd*, 484 F.2d 453 (4th Cir. 1973).

²³ *National Helium Corp. v. Morton*, 486 F.2d 995 (10th Cir. 1973); *Concerned About Trident v. Schlesinger*, 400 F. Supp. 154 (D.D.C. 1975); *Conservation Soc. of Southern Vermont v. Secretary of Transp.*, 362 F. Supp. 627 (D. Vt. 1973); *Cape Henry Bird Club v. Laird*, 359 F. Supp. 404 (D. Va. 1973). Courts which have not explicitly adopted the two-pronged test also require strict procedural compliance, and this appears to be the general view. See, e.g., *National Wildlife Federation v. Morton*, 393 F. Supp. 1286, 1296 (D.D.C. 1975), holding that procedural duties must be fulfilled to the "fullest extent possible," a high standard which

"full disclosure law,"²⁴ and they insist that the agency take a "hard look"²⁵ at the environmental impact of the proposed project.

On the other hand, the substantive contents of an EIS are tested by a far less rigorous standard. One court has held that NEPA creates no judicially enforceable duties,²⁶ but most courts have determined that the Act establishes sufficiently definite standards to permit meaningful, though limited, judicial review of the substantive environmental decisions of federal agencies.²⁷

The courts weigh several factors in determining the substantive adequacy of a given EIS, including the purpose underlying the impact statement requirement,²⁸ the practicability and reasonableness of including additional data,²⁹ the extent of compliance with the procedural requirements of § 102(2)(C),³⁰ the immediacy or remoteness of the threatened environmental harm,³¹ the cost-benefit analysis actually conducted by the decisionmaking agency,³² objective good faith,³³ and the existence of undiscussed possibilities for mitigation of harm.³⁴ Substantive compliance, however, is not subjected to strict review. Generally, an agency's decision will be overturned only if it is "arbitrary, capricious, an abuse of discretion, or contrary to law."³⁵ This lenient standard has been expressly adopted in a number of cases,³⁶ followed by implication in a few others,³⁷ and

will be vigorously enforced by the courts. *But see* *Westside Property Owners v. Schlesinger*, 415 F. Supp. 1298 (D. Ariz. 1976), where only "reasonable compliance" was required.

²⁴ *Sierra Club v. Froehle*, 359 F. Supp. 1289, 1338 (D. Tex. 1973).

²⁵ *Movement Against Destruction v. Trainor*, 400 F. Supp. 533 (D. Md. 1975). This decision explained that an agency need not accumulate the sum total of scientific knowledge about the environmental impact of the proposed project. *Id.* at 522.

²⁶ *Bucklein v. Volpe*, 1 E.L.R. 20043, 2 Env't'l Rep. Cases 1082 (N.D. Cal. 1970).

²⁷ *E.g.*, *Boone v. Tollatoba Creek Drainage Dist.*, 379 F. Supp. 1239 (D. Mass. 1974).

²⁸ *Chelsea Neighborhood Associations v. U.S. Postal Service*, 516 F.2d 378 (2d Cir. 1975).

²⁹ *Environmental Defense Fund v. Tennessee Valley Authority*, 492 F.2d 466 (6th Cir. 1974). The "rule of reason" test applies to this question; *Concerned About Trident v. Schlesinger*, 400 F. Supp. 454 (D.D.C. 1975).

³⁰ *Sierra Club v. Morton*, 379 F. Supp. 1254 (D. Colo. 1974).

³¹ *Basin Land Protection Ass'n v. Kleppe*, 417 F. Supp. 46 (D. Wash. 1976).

³² *National Wildlife Federation v. Morton*, 393 F. Supp. 1286 (D.D.C. 1975).

³³ *Sierra Club v. Morton*, 510 F. Supp. 813 (D. Fla. 1975).

³⁴ *Sierra Club v. Froehle*, 359 F. Supp. 1289 (D. Tex. 1973).

³⁵ *Lathan v. Brinegar*, 506 F.2d 677 (9th Cir. 1974).

³⁶ *Nucleus of Chicago Homeowners Ass'n v. Lynn*, 524 F.2d 225 (7th Cir. 1975), *cert. denied*, 424 U.S. 967 (1976); *Harlem Valley Transp. Ass'n v. Stafford*, 500 F.2d 328 (2d Cir. 1974); *Brown v. Callaway*, 497 F.2d 1235 (6th Cir. 1974); *Life of the Land v. Brinegar*, 485 F.2d 460 (9th Cir. 1973), *cert. denied*, 416 U.S. 961 (1974); *Cape Henry Bird Club v. Laird*, 359 F. Supp. 404 (D. Va. 1973), *aff'd*, 484 F.2d 453 (4th Cir. 1973); *Environmental Defense Fund, Inc. v. Armstrong*, 487 F.2d 814 (9th Cir. 1973), *cert. denied*, 416 U.S. 974 (1974), *reh.*

employed in conjunction with a requirement of "good faith" in several more.³⁸

Since the final decision to go ahead with a major federal action should be legislative rather than judicial, the courts should not be the final arbiter³⁹ and judicial review should be limited.⁴⁰ Given that reviewing courts measure the substantive adequacy of a NEPA statement by so lax a standard, whether there is presently any meaningful substantive review of impact statements is highly questionable. Indeed, a few federal courts have refused to examine EIS substance at all.⁴¹ Where substantive review is so diluted as to be virtually non-existent, and courts are merely ensuring procedural

denied, 419 U.S. 1041 (1974) (holding also that a "clearly erroneous" test is inappropriate); *Sierra Club v. Froehlke*, 486 F.2d 946 (7th Cir. 1973); *First Nat. Bank of Chicago v. Richardson*, 484 F.2d 1369 (7th Cir. 1973); *Baxley v. Corps of Engineers of U.S. Army*, 411 F. Supp. 1261 (D. Ala. 1976); *Arkansas Community Organization for Reform Now v. Brinegar*, 398 F. Supp. 685 (D. Ark. 1975), *aff'd*, 531 F.2d 864 (8th Cir. 1976); *Chelsea Neighborhood Associations v. U.S. Postal Service*, 516 F.2d 378 (2d Cir. 1975); *Minnesota Public Interest Research Group v. Butz*, 401 F. Supp. 1276 (D. Minn. 1975) (also noting that the Forest Service had acted within the scope of its authority).

³⁷ *Westside Property Owners v. Schlesinger*, 415 F. Supp. 1208 (D. Ariz. 1976) (the judiciary should ensure that NEPA's required methodology is followed, rather than provide a forum for the expression of substantive disagreements). See also *Sierra Club v. Froehlke*, 534 F.2d 1280 (8th Cir. 1976); *Brooks v. Coleman*, 518 F.2d 17 (9th Cir. 1975); *Daly v. Volpe*, 514 F.2d 1106 (9th Cir. 1975) (all using a "not clearly erroneous" test).

³⁸ *National Helium Corp. v. Morton*, 486 F.2d 995 (10th Cir. 1973) (requiring objective good faith compliance and reasonable discussion of the subject matter); *Conservation Soc'y of Southern Vermont v. Secretary of Transp.*, 362 F. Supp. 627 (D. Vt. 1973) (the substantive decision must be consistent with a good faith weighing of the proposed project's environmental impact); *Concerned About Trident v. Schlesinger*, 400 F. Supp. 454 (D.D.C. 1975) (requiring full, good faith consideration and a balancing of environmental factors); *Duke City Lumber Co. v. Butz*, 382 F. Supp. 326 (D.D.C. 1974).

Courts frequently employ "cost-benefit" language in their discussion of the "arbitrary and capricious" test. One interesting formulation appears in *Patterson v. Exxon*, 415 F. Supp. 1276 (D. Neb. 1976), a burden of proof opinion holding that, in the absence of evidence in the EIS that the actual cost-benefits balance struck by the agency was arbitrary or based on insufficient weight awarded environmental values, a court will examine only NEPA's procedural requirements. *Accord*, *Sierra Club v. Morton*, 510 F.2d 813 (D. Fla. 1975), wherein the court also utilized the standard arbitrary and capricious measure, as well as some "clear disregard of the evidence" language—truly a gatling gun approach. Simpler formulations may be found in *Minnesota Public Interest Research Group v. Butz*, 401 F. Supp. 1276 (D. Minn. 1975); and *Concerned About Trident v. Schlesinger*, 400 F. Supp. 424 (D.D.C. 1975).

³⁹ *Patterson v. Exxon*, 415 F. Supp. 1276 (D. Neb. 1976).

⁴⁰ *Concerned About Trident v. Schlesinger*, 400 F. Supp. 424 (D.D.C. 1975).

⁴¹ Under this view, a court must determine whether §102(2)(C) procedures have been followed, but cannot rule on the impact statement's substantive adequacy. *Columbia Basin Land Protection Ass'n v. Kleppe*, 417 F. Supp. 46 (D. Wash. 1976); *Upper West Fork River Watershed Ass'n v. Corps of U.S. Army Engineers*, 414 F. Supp. 908 (D. W.Va. 1976); *Essex County Preservation Ass'n v. Campbell*, 399 F. Supp. 208 (D. Mass. 1975); *Burleigh v. Calloway*, 362 F. Supp. 121 (D. Hawaii 1973).

compliance with NEPA, the national interest might best be served by wholly eliminating the lengthy and expensive delay of substantive sufficiency litigation. Congress should not be timid about expressly curtailing judicial review in this area.

III. DEFICIENCIES IN JUDICIAL RESOLUTIONS OF NEPA CONTROVERSIES

Even if the courts were to apply a stricter standard in evaluating substantive compliance with NEPA, the propriety of the judiciary as the nation's environmental decisionmaker is questionable. Litigation is costly and time-consuming.⁴² In addition, environmental litigation has two characteristics which aggravate the societal cost of employing the judicial model of dispute resolution: complexity and delay. Environmental disputes are inherently difficult cases, usually involving well-researched and technically detailed scientific testimony.⁴³ Moreover, the interdependency of environmental variables increases the complexity of EIS disputes. Environmental problems have been described as "polycentric" because they require "a complex of decisions, judgment upon each of which depends upon the judgment to be made upon each of the others."⁴⁴

The delay inherent in the litigation process also jeopardizes the validity of environmental decisions. Inflation, shifting demands for natural resources, changes in the populations of flora and fauna, international developments, economic variables, and other factors can make a given EIS obsolete. Clearly, NEPA's goal of intelligently balanced federal planning is frustrated where litigation invalidates an EIS not by rule of law, but by passage of time.⁴⁵

⁴² EIS substantive litigation might involve: (1) petitions for a temporary restraining order or preliminary injunction; (2) detailed discovery, testimony, and trial on the merits; (3) appeals to the appropriate circuit court of appeals; and (4) requests for hearings before the United States Supreme Court. The TAPS litigation involved a case history even more complicated. See Section IV, *infra*.

⁴³ *Mid-Shiawassee County Concerned Citizens v. Train*, 408 F. Supp. 650 (D. Mich. 1976), refers to "opposing scientific evidence" and requires the inclusion of all "responsible scientific opinion concerning adverse environmental effects." 408 F. Supp. at 656. As a practical matter, however, private corporations which file impact statements will disclose all available studies and testimonies in the EIS and refute those which are unfavorable to the project; omissions cast the EIS into disrepute and create the opportunity for judicial rejection on the ground of procedural inadequacy. Conversation with Frank Friedman, General Counsel, Atlantic Richfield Corporation.

⁴⁴ H. HART & A. SACKS, *THE LEGAL PROCESS* 22 (tent. ed. 1958).

⁴⁵ The Trans-Alaska Pipeline project is again a case in point. During the course of the lengthy *Wilderness Society* litigation (Section IV, *infra*), the formation of the Organization of Petroleum Exporting Countries (OPEC) and the promulgation of national ambient air quality standards served to increase substantially the price of Alaskan crude, so that the

The present system of judicial review can be justified only if the judiciary is uniquely able to moderate environmental disputes. Yet, the courts frequently lack the requisite expertise to handle complex environmental controversies. At least one judicial opinion has recognized this problem.⁴⁶ A California court dismissed a class action brought on behalf of Los Angeles County against 291 alleged polluters, holding that "a court of equity lacks the facilities or competency to undertake the problem of abating air pollution within the Los Angeles Basin."⁴⁷ The court stated:

It is readily apparent that the control of the emission of air pollutants is a highly complex problem. Our industrialized civilization is dependent upon energy derived from the oxidation of fossilized fuels. Many industrial processes involve the release directly or indirectly of volatile substances which can cause discomfort to others. Such unavoidable discomfort is one of the prices one pays for living in an industrialized civilization. The court does not have the facilities to undertake the balancing of the interests of the inhabitants of the Los Angeles Basin against the needs of productive industry in this same area. . . .⁴⁸

In order to deal with this lack of competence, special means of assisting the courts in environmental disputes have been suggested. The National Academy of Sciences recommends that courts appoint public agencies as "masters in chancery" to assist with the technical aspects of environmental litigation.⁴⁹ Expert advisors such as economists, engineers, administrators, and community leaders also could aid the courts.⁵⁰ Even specialized courts of environmental law have been proposed.⁵¹

Whether even a speedy and capable judiciary should be making major environmental policy decisions is doubtful. In America's tri-

present West Coast demand for Prudhoe oil is far smaller than it was in 1970. See generally Corrigan, *Now That the Pipeline's Almost Built, Who's Going to Take the Oil?*, NAT'L J. 1762 (Dec. 11, 1976).

⁴⁶ *Diamond v. General Motors Corp.*, No. 947429 (Los Angeles, Cal. Super. Ct.), dismissed, Aug. 20, 1969, appeal docketed, Civ. No. 36600, 2d Dist. Ct. App., Oct. 15, 1969.

⁴⁷ *Id.*

⁴⁸ *Id.*

⁴⁹ J. KRIER & R. STEWART, ENVIRONMENTAL LAW AND POLICY at IV-137 (tent. rev. ed. 1976), citing NATIONAL ACADEMY OF SCIENCES, NATIONAL RESEARCH COUNCIL, WASTE MANAGEMENT AND CONTROL 233-34 (1975). Such a solution, valid as it may be in many types of pollution litigation, is obviously precluded in NEPA cases, since those agencies which could best assist the court are the very ones which have prepared the EIS under examination.

⁵⁰ KRIER & STEWART, *supra* note 49, at IV-137. Judge Harold Leventhal has made similar suggestions. See Leventhal, *Environmental Decision Making and the Courts*, 122 U. PA. L. REV. 509 (1974).

⁵¹ KRIER & STEWART, *supra* note 49, at IV-136.

parted system of government, such major decisions should be made, at least in theory, by the legislative branch. Important questions of national and international impact are not "reducible to courtroom dialectic and resolution."⁵² As one commentator has noted, "it is inappropriate for the judicial institution to make a substantive determination about the use and protection of air. That choice is properly made, if at all, in the representative bodies of government, as the policy choice of those represented."⁵³

In sum, the ability of the courts to handle major environmental issues with economy, efficiency, and the proper level of expertise, is in serious question. Faced with the risks which courtroom delay poses, and recognizing that case-by-case environmental determinations could create major public policy which more properly should be decided by the legislature, the courts, perhaps correctly, have confined judicial review to an examination of whether NEPA's procedural requirements have been satisfied, and have declined to review closely the substantive merits of impact statements.

IV. CONGRESSIONAL INTERVENTION

Congress has intervened in at least one major environmental dispute—the Trans-Alaska Pipeline litigation—to wrest decisionmaking power from the courts. Following a review of this controversy, this article will discuss alternative mechanisms for future congressional action.

The extensive history of the Trans-Alaska Pipeline dates from January, 1968, when oil was first discovered at Prudhoe Bay, on Alaska's North Slope.⁵⁴ The North Slope field contained ten billion barrels of proven reserves, making it the largest proven field in North America.⁵⁵ The Trans-Alaska Pipeline System (TAPS), a consortium of oil companies, proposed that the oil be transported by 48-inch pipe nearly 800 miles to an ice-free port in Southeastern Alaska and thence forwarded by tanker to West Coast markets.⁵⁶ After TAPS applied for land use permits authorizing construction

⁵² *Id.* at IV-93, citing Sedulus, *How Dull the Advocates*, NEW REPUBLIC 22 (May 25, 1970).

⁵³ Comment, *The Role of the Judiciary In the Confrontation With The Problems of Environmental Quality*, 17 U.C.L.A. L. REV. 1070, 1074-75 (1970). (Hereinafter cited as *The Role of The Judiciary*).

⁵⁴ *Atlantic-Humble Finds Oil on North Slope*, ALASKA CONSTRUCTION AND OIL REPORT, (April, 1968), at 47.

⁵⁵ See *Judicial Standards*, *supra* note 20, at 1609.

⁵⁶ Knott, *The Pipeline Story—Or How the Caribou Came to Fame*, BP SHIELD INT'L 8 (May, 1970).

of the Pipeline of June 10, 1969,⁵⁷ the Department of the Interior prepared certain environmental requirements to be incorporated into the permits,⁵⁸ lifted the "freeze" on Native-claimed land in Alaska so that rights-of-way could be granted,⁵⁹ and prepared to issue a permit for the pipeline's haul road.⁶⁰ These permits would have been issued within a year,⁶¹ but NEPA and other litigation delayed issuance until January 23, 1974.⁶² Without congressional intervention in late 1973,⁶³ litigation could have stalled the pipeline project for several additional years.

Early in 1970, two groups of plaintiffs, representing Natives and environmentalists, petitioned the District Court for the District of Columbia for an injunction to prevent issuance of the pipeline approvals. The Natives argued that the project threatened their traditional means of subsistence and that the government's approbation would violate both its fiduciary duties and NEPA.⁶⁴ District Judge Hart granted an injunction prohibiting the issuance of a permit for a pipeline haul road over any Native-claimed land.⁶⁵ Congress ultimately resolved the Native claims problem by enacting the unprecedented Alaska Native Claims Settlement Act,⁶⁶ thereby extinguishing any and all Native claims by payment of \$962.5 million and forty million acres of Alaska land.⁶⁷

Although the challenge by the Natives was resolved in late 1971,⁶⁸ a lawsuit filed by three conservationist organizations⁶⁹ caused more extensive delay. The conservationists charged that the issuance of pipeline authorization permits would violate the width requirements prescribed for oil pipelines by the Mineral Leasing Act of

⁵⁷ The application is included in *Hearings on the Status of the Proposed Trans-Alaska Pipeline Before the Senate Comm. on Interior and Insular Affairs*, 91st Cong., 1st Sess., pt. 1, 103-06 (1969).

⁵⁸ Federal Task Force on Alaskan Oil Development, Stipulations for the Trans-Alaska Pipeline System, U.S. Dep't of the Interior (Sept., 1969).

⁵⁹ P.L.O. 4760, 35 Fed. Reg. 424 (1970).

⁶⁰ *Wilderness Soc'y v. Hickel*, 325 F. Supp. 422 (D.D.C. 1970) (findings of fact).

⁶¹ *Id.* at 423.

⁶² The Anchorage Times, "Oil & the Pipeline," January 8, 1977, at A-7, col. 3.

⁶³ Trans-Alaska Pipeline Authorization Act, 43 U.S.C. §§ 1651 *et seq.* (Supp. III 1973).

⁶⁴ The Anchorage Times, "Oil & the Pipeline," January 8, 1977, at A-4, col. 2-3.

⁶⁵ *Allakeet v. Hickel*, Civil No. 706-70, 1 E.L.R. 65021 (D.D.C. 1970).

⁶⁶ Alaska Native Claims Settlement Act, 43 U.S.C. §§ 1601 *et seq.* (Supp. I 1971).

⁶⁷ *Id.* § 1605.

⁶⁸ The Settlement Act probably would have been enacted at an earlier time had TAPS otherwise stood ready to proceed.

⁶⁹ The Wilderness Society, Friends of the Earth, and Environmental Defense Fund, Inc.

1920⁷⁰ and that the project's EIS was substantively inadequate.⁷¹ Judge Hart, noting that the Department of the Interior stood ready to issue the haul road permit,⁷² concluded as a matter of law that such action would violate both NEPA and the Mineral Leasing Act. The court accordingly granted the preliminary injunction to prevent irreparable injury to the plaintiffs.⁷³

Judge Hart correctly found the EIS to be insufficient. Section 102(2)(C) procedures had not been met, as the Department had neither prepared an EIS concerning the proposed sale to TAPS of gravel to be used in construction, nor addressed environmental aspects in the haul road impact statement.⁷⁴ Interpreting the court's ruling as required an EIS dealing with the pipeline project as a whole,⁷⁵ the Department commenced work on a more comprehensive impact statement.

A preliminary version of the Draft Impact Statement, a document to be circulated among public agencies for informed comment,⁷⁶ was completed in November, 1970, and published two months later.⁷⁷ Alyeska Pipeline Service, the successor in interest to TAPS, called the 200 page document "substantially more detailed than any previously drafted by a federal agency pursuant to NEPA."⁷⁸ In the public hearings that followed, a 10,000 page record, representing the testimony and statements of more than 2,500 individuals and organizations, was developed. In response to the criticism voiced by many of the participants in the hearing process, the Department created a special §102 "Statement Task Force" to prepare a final EIS. The Task Force obtained information from the governments of the United States, Canada, and Alaska, and from representatives of private interests, examining land, marine, and alternative Canadian routes. Alyeska simultaneously submitted a 29 volume Project

⁷⁰ 30 U.S.C. §§ 181 *et seq.* (1970). Section 185 provides: "Rights-of-way through the public lands. . . may be granted [to cover] said pipeline and twenty-five feet on each side of the same."

⁷¹ Dominick & Brody, *The Alaska Pipeline: Wilderness Society v. Morton And The Trans-Alaska Pipeline Authorization Act*, 23 AMER. U. L. REV. 337, 341 n. 10 (1973).

⁷² *Wilderness Society v. Hickel*, 325 F. Supp. 422, 432 (D.D.C. 1970).

⁷³ *Id.* at 424.

⁷⁴ *Judicial Standards*, *supra* note 20, at 1612 n. 92.

⁷⁵ *Id.*

⁷⁶ 42 U.S.C. § 4332(D)(iv) (1970).

⁷⁷ For a detailed historical account of the EIS, see Myers, *Federal Decisionmaking And the Trans-Alaska Pipeline*, 4 ECOLOGY L. Q. 915 (1975).

⁷⁸ Brief for Alyeska as Appellee at 24, *Wilderness Society v. Morton*, 479 F.2d 842 (Herein-after cited as Alyeska brief).

Description containing specific data. The climax of this unprecedented environmental research effort was the Final EIS, a nine volume compendium⁷⁹ covering intricate project essentials as well as numerous alternatives to the Trans-Alaska transportation system.⁸⁰

The Final EIS was published on March 20, 1972, and for 45 days thereafter comments were received from numerous public and private sources. The Department of the Interior studied these massive materials and granted the pipeline permits on May 11, 1972, at the same time publishing a 45 page statement of reasons for approval.⁸¹ Judge Hart reviewed the Final EIS and ruled in an oral opinion⁸² that the requirements of NEPA and the Mineral Leasing Act were met. The preliminary injunction was dissolved. However, the Court of Appeals for the District of Columbia ruled that the Mineral Leasing Act width requirements had been violated⁸³ and enjoined on this ground alone the construction of the pipeline.⁸⁴ Unfortunately, the court did not rule on the substantive adequacy of the Final EIS. Although the majority considered the EIS issue to be "remote" and rooted in disputed factual matters,⁸⁵ three judges⁸⁶ dissented on this question, stating that there was sufficient discussion of each alternative in the impact statement to meet NEPA requirements.⁸⁷

As a consequence of the appellate court's failure to decide the NEPA compliance issue, that issue would have to be relitigated once Congress amended the Mineral Leasing Act to accomodate the Trans-Alaska Pipeline.⁸⁸ Judge Wright, writing for the majority, admitted that such a delay might well invalidate the Final EIS: "Should amendment of the [Mineral Leasing] Act take several years, the analysis of environmental, economic, and other costs in

⁷⁹ Three volumes consist of an Analysis of the Economic and Security Aspects of the Trans-Alaska Pipeline, six volumes are properly the Environmental Impact Statement.

⁸⁰ Among alternatives discussed were a reduction in energy consumption, increased oil imports, additional domestic oil production in areas other than the North Slope, modification of FPC natural gas pricing, nuclear stimulation of natural gas reservoirs, increased coal production, increased use and development of nuclear energy sources, and development of synthetic fossil fuel sources, of geothermal power, and of other advanced power generation techniques. Myers, *supra* note 77, at 937.

⁸¹ See Aleyeska brief, *supra* note 78, at 50-51.

⁸² *Wilderness Soc'y v. Morton*, 4 Env't'l Rep. Cases 1467 (D.D.C. Aug. 15, 1970).

⁸³ *Wilderness Soc'y v. Morton*, 479 F.2d 842 (D.C. Cir. 1973).

⁸⁴ *Id.*

⁸⁵ *Id.* at 889-90.

⁸⁶ Judges Robb and Wilkey joined in Judge McKinnon's concurring opinion.

⁸⁷ *Wilderness Soc'y v. Morton*, 479 F.2d 842, 907 (D.C. Cir. 1973).

⁸⁸ Judge Wright, writing for the court, foresaw congressional intervention as to this matter, but was uncertain when it might take place. See 479 F. Supp. at 889.

the present Impact Statement may become outdated.”⁸⁹ Notwithstanding this danger, the United States Supreme Court denied certiorari,⁹⁰ thereby foreclosing further review of the decision.

Congress, recognizing the importance of the Alaskan project and wishing to avoid further NEPA litigation, speedily amended the Mineral Leasing Act⁹¹ and simultaneously approved the Trans-Alaska Pipeline Authorization Act.⁹² This latter Act authorized the immediate issuance of the pipeline permits and eliminated judicial review of the Final Impact Statement.⁹³ The judiciary had proven totally ineffective in resolving the Trans-Alaska problem, and congressional intervention was necessary. This judicial failure, compared with the legislative success in this grave problem, recommends the advisability of the legislative decisionmaking approach to other major environmental policy decisions.

V. LEGISLATIVE REMAND VS. PRE-EMPTION LEGISLATION

A. *The “Remand to Congress” and Its Deficiencies*

At the height of the pipeline controversy, one commentator proposed that the litigation concerning the sufficiency of the Final Impact Statement take the form of a “remand to Congress.”⁹⁴ This approach would have had the court enjoin the issuance of the pipeline permits, remanding to Congress the decision whether to exempt the entire project from NEPA’s requirements.⁹⁵ The idea of a legislative remand was first suggested by Professor Sax,⁹⁶ who believed that public policy should not be made by the courts. He argued that the role of the courts is to ensure that the proper body is allowed to make a particular policy determination.⁹⁷ The judiciary in NEPA cases, therefore, need only determine whether Congress or the defendant agency is best suited to approve a particular federal project. This method could be utilized whenever a federal agency cannot

⁸⁹ *Id.*

⁹⁰ *Wilderness Soc’y v. Morton*, 411 U.S. 917 (1973).

⁹¹ Federal Lands Right-of-Way Act of 1973, Pub. L. No. 93-153, 87 Stat. 576 (Nov. 16, 1973), amending § 28 of the Mineral Leasing Act of 1920, 30 U.S.C. § 185 (1970).

⁹² 43 U.S.C. §§ 1651 *et seq.* (Supp. I 1971).

⁹³ *Id.* See text at note 100, *infra*.

⁹⁴ *Judicial Standards*, *supra* note 20, at 1631-32.

⁹⁵ *Id.* Senator Dominick later interpreted the court of appeals decision in *Wilderness Society* to be a “legislative remand.” See Dominick & Brody, *supra* note 71, at 350.

⁹⁶ J. SAX, *DEFENDING THE ENVIRONMENT* ch. 8 (1971).

⁹⁷ *Id.*

effectively comply with NEPA.⁹⁸ Remand would occur only if Congress is found better suited to render the decision.

Nevertheless, the remand approach requires prolonged litigation. An EIS would have to be litigated until the highest available appellate court determined which authority, the agency involved or Congress, is best equipped to authorize the project. In the Trans-Alaska controversy, however, the court of appeals enjoined the agency approval for failure to comply with a statute other than NEPA; that is, the Mineral Leasing Act. Standing alone, this did not constitute a true remand since NEPA litigation would have been reinstituted had Congress merely amended the Leasing Act. If the injunction were subsequently upheld on the basis of an EIS insufficiency, a "remand to Congress" might then have occurred. But, since Congress resolved the NEPA issue before the EIS insufficiency was affirmed, the solution to the pipeline litigation was more properly a pre-emption by, not a remand to, Congress.

The remand approach, while properly placing the power to make major environmental decisions in Congress, unfortunately requires a determination by the court of last resort that the particular case justifies congressional resolution. Consequently, the remand perpetuates those deficiencies of the judicial approach which pose such great obstacles to environmental litigation: expense and delay. On the other hand, the remand approach eliminates the problem of judicial inexpertise and prevents the formulation of major public policy by the courts.

B. The Case for Pre-emption Legislation

Pre-emption legislation, a modification of the legislative remand, may be the best solution for controversies concerning the environmental impact of crucial federal projects. Pre-emption legislation takes effect prior to judicial action, thus conclusively deciding the matter at hand and foreclosing further judicial intervention.⁹⁹ This

⁹⁸ See *Judicial Standards*, *supra* note 20, at 1639.

⁹⁹ One commentator considers the authorization act to be "constitutionally infirm." Comment, *The National Environmental Policy Act of 1969 And The Energy Crisis: The Road to Alaska*, 10 COLUM. J.L. & SOC. PROB. 265, 318 (1974). This view considers the authorization act to be a selective withdrawal of the right of particular environmental groups to litigate certain environmental issues and, hence, a violation of due process and equal protection. *Id.* at 321. Congress' modification of its own statute does not infringe upon any constitutional guarantees. Due process protection is guaranteed by the combination of § 102(2)(C) procedural requirements, while equal protection is assured by the fact that NEPA pre-emption legislation is directed to the Secretary of the Interior who represents every citizen. Dominick

alternative short-circuits those judicial deficiencies perpetuated by the legislative remand. Like the remand, however, it places the problem and its solution in the proper governmental sphere.

The Trans-Alaska Pipeline Authorization Act which resolved the TAPS litigation is a prototype of NEPA pre-emption legislation. This Act prevented further review of the NEPA issue by ordering that:

The actions. . . which relate to the construction and completion of the pipeline system. . . as described in the Final Environmental Impact Statement of the Department of Interior, shall be taken without further action under the National Environmental Policy Act of 1969; and the actions. . . shall not be subject to judicial review.¹⁰⁰

This resolution justifiably prevented further hazardous and costly delay of the project, eliminated the problem of judicial inexperience,¹⁰¹ and ensured the progress of a vital national undertaking.¹⁰² However, the misfortune of the Authorization Act is that Congress waited so long to wrest from the courts an issue of such national and international importance. Since the Act¹⁰³ overruled all that the courts had taken a necessarily long time to decide, much time and expense could have been saved had Congress acted earlier. Pre-emption legislation is most advantageous when it anticipates, rather than responds to, litigation. In the future, Congress should be more willing to undertake a major role in environmental policy-making where large-scale projects substantially affect the national interest. Nonetheless, pre-emption legislation is too cumbersome a process to be used in all cases of federal environmental decision-making. The problem, then, is to delimit those situations in which pre-emption should be employed.

Factors which indicate the appropriateness of the remand ap-

& Brody, *supra* note 71, at 370. Further, Congress has inherent power to manage the public lands under Art. IV, § 3 of the Constitution.

¹⁰⁰ 43 U.S.C. § 1652(a) (Supp. I 1971).

¹⁰¹ Judicial inexperience would have been a relatively minor concern in any relitigation of *Wilderness Society* because both District Judge Hart and the District of Columbia Court of Appeals judges possess great familiarity with environmental disputes.

¹⁰² Congress' findings of fact indicate that the "arbitrary and capricious" test had, in fact, been met by the project's Final Impact Statement:

The Department of the Interior and other Federal agencies, have, over a long period of time, conducted extensive studies of the technical aspects end of the environmental, social, and economic impacts of the proposed trans-Alaska oil pipeline, including consideration of a trans-Canada pipeline.

43 U.S.C. §1651(b) (Supp. I 1971).

¹⁰³ In conjunction with the amendment of the Mineral Leasing Act.

proach are of limited value in determining the efficacy of the pre-emption approach. One commentator suggests that a legislative remand "has in effect stated that there are situations which may arise from time to time which require an exemption from the stringent requirements of NEPA."¹⁰⁴ This theory would limit remand to problems of "great magnitude"¹⁰⁵ to which Congress had previously devoted a great deal of attention.¹⁰⁶ Another writer lists seven factors to be balanced by a court when considering a remand to Congress: the extent of permissible administrative discretion, the magnitude of the threatened harm to the environment, the size of the project, the degree of sophistication of available project data, the amount of time and money already spent on attempted compliance with NEPA, the number of unsatisfactory prior impact statements, and procedural good faith.¹⁰⁷ Both of these formulations, however, are based on hindsight—the former looking to demonstrated congressional experience in the area, and the latter focusing upon the prior history of the particular project. Such factors, while useful in a remand situation, do not provide the necessary prediction required in a pre-emption decision.

Pre-emption legislation must be able to anticipate problems. A determination that pre-emption is proper should be based upon a prediction that a federal project will best proceed if Congress takes immediate and final action. Early consideration of "looking forward" factors, including project size, administrative discretion, threatened harm to the environment, available information, and anticipated savings of time and money, as well as administrative expertise, urgency of the project, and the extent to which the arbiter will be molding significant public policy, should enable Congress to correctly decide whether pre-emption is warranted.

If a lesson was taught by the TAPS litigation, the nation's legislators learned it well, for Congress wisely adopted a pre-emption approach with regard to the proposed Alaska "Natural Gas" Transportation System. Foreseeing the need for a governmental decision concerning the transportation of North Slope natural gas to domestic markets,¹⁰⁸ Title III of the Authorization Act directed the Interior

¹⁰⁴ Dominick & Brody, *supra* note 71, at 361.

¹⁰⁵ *Id.* at 362.

¹⁰⁶ *Id.* at 363.

¹⁰⁷ *Judicial Standards*, *supra* note 20, at 1637-38.

¹⁰⁸ DEPARTMENT OF THE INTERIOR, ALASKAN NATURAL GAS TRANSPORTATION SYSTEMS, A REPORT TO THE CONGRESS PURSUANT TO PUBLIC LAW 93-153 (December, 1975), at 1.

Department to investigate the feasibility of natural gas pipeline transportation systems through Alaska and Canada.¹⁰⁹ After reviewing the findings of the requested study,¹¹⁰ Congress set up a comprehensive mechanism “for making a sound decision as to the selection of a transportation system for delivery of Alaska natural gas”¹¹¹ and eliminated judicial review of project impact statements.

The enactment of a joint resolution under section 719f of this title approving the decision of the President *shall be conclusive as to the legal and factual sufficiency of the environmental impact statements* submitted by the President relative to the approved transportation system and *no court shall have jurisdiction to consider questions respecting the sufficiency of such statements* under the National Environmental Policy Act of 1969.¹¹²

The Prudhoe Bay field holds the largest proven natural gas reserve in North America,¹¹³ and “[t]he magnitude of the physical undertaking and cost of building a gas transportation system from Alaska apparently exceeds any prior U.S. private undertaking.”¹¹⁴ When Congress took action, three routes were under consideration, each with a massive EIS. Pre-emption in this case was, therefore, particularly appropriate.

VI. CONCLUSION

The National Environmental Policy Act of 1969 was designed to incorporate environmental considerations into the process by which federal agencies recommend and implement major federal projects. Nevertheless, judicial review of environmental impact statements has failed to promote environmental quality in large-scale undertakings. Congress must be prepared to decide major environmental decisions itself where to do so would best serve the interests of economy, efficiency and public policy. NEPA should not be served at the expense of democratic decisionmaking, particularly where strict adherence to the Act would result in needless litigation. Early pre-emption of NEPA review for crucial federal projects should become a standard tool of legislative policymaking.

¹⁰⁹ 43 U.S.C. § 1651 (Supp. I 1971).

¹¹⁰ See *Judicial Standards*, *supra* note 20.

¹¹¹ Alaska Natural Gas Transportation Act, 15 U.S.C.A. §§ 719 *et seq.* (Supp. 1976).

¹¹² *Id.* § 719(c)(3).

¹¹³ El Paso Alaska Company, *et. al.*, Docket No. CP75-96, Federal Power Commission (Initial Decision On Competing Applications For An Alaskan Natural Gas Transportation Project) (Feb. 1, 1977), at 7.

¹¹⁴ *Id.* at 9.

IMPLEMENTATION OF THE ENVIRONMENTAL IMPACT STATEMENT†

Overemphasis on the preparation of the environmental impact statement (EIS) has resulted in inadequate implementation of the goals of the National Environmental Policy Act (NEPA).¹ NEPA requires federal agencies to prepare EISs that assess and publicly record the environmental effects of alternative actions available to an agency.² By forcing agencies to gather and analyze information on the impact of proposed actions, Congress sought to enhance environmental quality.³ Agencies, however, have failed to use the EIS in designing subsequent actions and have neglected to establish procedures that ensure that the results of those actions conform to EIS predictions. As a result, the effectiveness of NEPA is in doubt.

This Note analyzes and criticizes two responses to this failure of the basic strategy of NEPA: the purely substantive response of requiring agencies to pick from the EIS the alternative action causing least harm to the environment, and the purely procedural response of the Council on Environmental Quality's (Council) new regulations,⁴ which merely require agencies to produce and disclose more infor-

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1. Pub. L. No. 91-190, 83 Stat. 852 (1969) (codified at 42 U.S.C. §§ 4321-4347 (1970)). NEPA is divided into three major parts: §§ 2, 101, 42 U.S.C. §§ 4321, 4331 (setting out "Purpose" and "Declaration of National Environmental Policy"); §§ 102-105, 42 U.S.C. §§ 4332-4335 (establishing procedures to facilitate achievement of national policy); §§ 201-207, 42 U.S.C. §§ 4341-4347 (establishing Council on Environmental Quality to advise President and coordinate environmental policy in executive branch).

2. Section 102(2)(C), 42 U.S.C. § 4332(2)(C) (1970), requires all federal agencies to "include in every recommendation or report on proposals for legislation and other major federal actions significantly affecting the quality of the human environment, a detailed statement [EIS] by the responsible official."

3. See *Vermont Yankee Nuclear Power Corp. v. Natural Resources Defense Council, Inc.*, 435 U.S. 519, 558 (1978) (message of NEPA both procedural and substantive); S. REP. NO. 296, 91st Cong., 1st Sess. 19-20 (1969) (EIS designed to implement NEPA goal of environmental quality); R. LIROFF, *A NATIONAL POLICY FOR THE ENVIRONMENT* 74-82 (1976) (NEPA's primary purpose is to change agency behavior by requiring agency consideration of more and different information, although tendencies in organizational behavior make agencies consider only information supportive of their missions); Andrews, *Agency Responses to NEPA: A Comparison and Implications*, 16 NAT. RESOURCES J. 301, 322 (1976) ("The enactment of NEPA was an attempt to bring about administrative change by changes in procedures . . ."); Dreyfus & Ingram, *The National Environmental Policy Act: A View of Intent and Practice*, 16 NAT. RESOURCES J. 243, 254 (1976) ("Above all, the impact statement was not intended merely to provide data or description, but to force a change in the administrative decisions affecting the environment.")

4. 43 Fed. Reg. 25,230 (1978) (to be codified at 40 C.F.R. § 1500) [hereinafter cited by section as *Proposed Regulations*]. An earlier draft of the Regulations was circulated among agencies and made available to the public. 8 ENVIR. REP. (BNA) 1236, 1291 (1977).

mation. The Note concludes that the substantive response is not feasible, and that the procedural response is not adequate. Alternatively, the Note proposes a middle ground that gives agencies discretion in the choice of action, but requires that all practicable measures be employed to mitigate environmental harm caused by the actions chosen.

I. The Failure to Achieve NEPA's Goals Through the Preparation of EISs

Operating at the behest of private litigants, courts have carried the major responsibility for enforcing the requirement that agencies prepare EISs for all actions that significantly affect the environment.⁵ The Council, through its Guidelines,⁶ has defined for courts⁷ and agencies⁸ the subjects that must be discussed in the EIS.⁹

Both the Council and the courts have emphasized the requirement that agencies include relevant information in the EIS, but have not fo-

5. Of the 654 cases filed under NEPA from 1970 to 1975, 363 challenged agency action because no EIS had been prepared, and most of the remaining 291 cases challenged the adequacy of the EIS. COUNCIL ON ENVIRONMENTAL QUALITY, ENVIRONMENTAL IMPACT STATEMENTS 31, 32 (1976) [hereinafter cited as COUNCIL STUDY]; see, e.g., *Greene County Planning Bd. v. FPC*, 455 F.2d 412 (2d Cir.), cert. denied, 409 U.S. 849 (1972) (Federal Power Commission must prepare EIS); *Calvert Cliffs' Coordinating Comm. v. Atomic Energy Comm'n*, 449 F.2d 1109 (D.C. Cir. 1971) (Atomic Energy Commission must prepare EIS). See generally F. ANDERSON, NEPA IN THE COURTS (1973) (review of cases requiring preparation of EIS); Cortner, *A Case Analysis of Policy Implementation: The National Environmental Policy Act of 1969*, 16 NAT. RESOURCES J. 323, 329-34 (1976) (importance of courts in ensuring preparation of EIS).

6. The Council has maintained two roles throughout its eight years of existence: (1) advisor to the President on general environmental matters, and (2) supervisor of NEPA's implementation by the executive branch. See R. ANDREWS, ENVIRONMENTAL POLICY AND ADMINISTRATIVE CHANGE 27-41 (1976); R. LIROFF, *supra* note 3, at 36-73. Pursuant to the latter duty, the Council has issued Guidelines for the preparation of the EIS, 40 C.F.R. § 1500 (1977). The proposed regulations, issued under the authority of Exec. Order No. 11,991, 42 Fed. Reg. 26,967 (1977), will update these procedures.

7. See W. RODGERS, ENVIRONMENTAL LAW 705 (1977) ("[T]he courts and the agencies have settled upon a course of deference to . . . [Council] guidance and interpretations of NEPA.")

8. *Id.* at 706 (most federal agencies have promulgated regulations that follow Council Guidelines).

9. The EIS must include descriptions of: (1) the existing environment to be affected by agency action, 40 C.F.R. § 1500.8(a)(1) (1977); (2) the proposed action and its purposes, *id.*; and (3) the relationship of the action to land use plans and controls in the affected area, *id.* § 1500.8(a)(2). It must suggest general "alternative" means of performing the action, *id.* § 1500.8(a)(4), and "mitigation methods" for minimizing the adverse consequences of each alternative, *id.* § 1500.8(a)(5). Finally, the EIS must predict the impact of the agency action on the environment, *id.* § 1500.8(a)(3), including unavoidable adverse consequences, *id.* § 1500.8(a)(5), the relationship of the short-term use under agency plans to long-term productivity, *id.* § 1500.8(a)(6), and resulting irretrievable commitments of resources, *id.* § 1500.8(a)(7).

cused on the use made of the EIS in implementing the agency action.¹⁰ Courts, the Council, and commentators have inferred two major functions of the EIS from the structure of NEPA: forcing the agency to expand the universe of information available to it through the process of EIS preparation,¹¹ and notifying other federal agencies, state and local governments, citizens, and Congress of the nature of the proposed agency action and its potential impact on the environment.¹² These functions, however, are valuable only insofar as they help to minimize environmental harm caused by agency actions and thereby to achieve the purpose of NEPA.¹³

NEPA attempts to remedy the tendency of federal agencies to ignore the adverse environmental consequences of their decisions because of the single-mindedness with which they pursue their "missions."¹⁴

10. The NEPA case law has been dominated by the requirement that agencies prepare the EIS and include relevant information in it. *See, e.g.*, *County of Suffolk v. Secretary of Interior*, 562 F.2d 1368 (2d Cir. 1977), *cert. denied*, 434 U.S. 1064 (1978) (information required in EIS for offshore oil leasing); *City of Davis v. Coleman*, 521 F.2d 661 (9th Cir. 1975) (information required in EIS for freeway interchange); *Calvert Cliffs' Coordinating Comm. v. Atomic Energy Comm'n*, 449 F.2d 1109 (D.C. Cir. 1971) (EIS must be prepared prior to agency decision); *COUNCIL STUDY*, *supra* note 5, at 31-32. The Council Guidelines specify who shall prepare the EIS, 40 C.F.R. § 1500.4 (1977), when they shall be prepared, *id.* § 1500.2(a), and what they shall contain, *id.* § 1500.8, but they do not say what must be done with the EIS after it is prepared and circulated to other agencies for comment, *id.* § 1500.9. "[T]he normal remedy when an EIS is found . . . to be deficient is an injunction and an order to shore up the statement." *Natural Resources Defense Council, Inc. v. Callaway*, 389 F. Supp. 1263, 1277 (D. Conn. 1974), *rev'd on other grounds*, 524 F.2d 79 (2d Cir. 1975).

11. *See, e.g.*, *Sierra Club v. Morton*, 510 F.2d 813, 819 (5th Cir. 1975) (EIS to provide information to agency prior to oil and gas leasing); *Trout Unlimited v. Morton*, 509 F.2d 1276 (9th Cir. 1974) (EIS to provide information on Teton dam project); *D'Amato & Baxter, The Impact of Impact Statements Upon Agency Responsibility: A Prescriptive Analysis*, 59 *Iowa L. Rev.* 195 (1973) (setting out NEPA's goals).

12. *See Environmental Defense Fund, Inc. v. Corps of Eng'rs*, 325 F. Supp. 749, 759 (E.D. Ark. 1971), *modified*, 342 F. Supp. 1211, *aff'd*, 470 F.2d 289 (8th Cir. 1972), *cert. denied*, 412 U.S. 931 (1973) ("At the very least, NEPA is an environmental full disclosure law The 'detailed statement' required by § 102(2)(C) should, at a minimum, contain such information as will alert the President, the Council . . . , the public, and indeed, the Congress, to all known possible environmental consequences of proposed agency action.") (emphasis in original). Disclosure to both the public and agencies has been used largely to trigger suits or comments identifying inadequacies in the EIS. *COUNCIL STUDY*, *supra* note 5, at 31-32 (predominance of suits challenging agency decision not to prepare EIS or challenging adequacy of EIS). Disclosures in the EIS, however, have not prevented agency action with adverse environmental effects. Neither Congress nor the Office of Management and Budget, the two institutions with direct control over agencies through the budget, has moved to stop such actions. *R. LIROFF*, *supra* note 3, at 122-24, 139. Indeed, Congress removed the requirement of further preparation of an EIS in the celebrated case of the Trans-Alaska Pipeline System. *Trans-Alaska Pipeline Authorization Act*, Pub. L. No. 93-153, 87 Stat. 584 (1973) (codified in 43 U.S.C. §§ 1651-1655 (Supp. V 1975)).

13. *See* note 3 *supra* (purpose of NEPA).

14. *R. LIROFF*, *supra* note 3, at 75-82.

The mission of an agency is defined by the goals that its members wish to achieve (*e.g.*, construction of dams by the Corps of Engineers or elimination of pollutants by the

NEPA does not seek to change the existing missions of government agencies; rather it seeks to add the goal of improved environmental quality.¹⁵ The assumption that environmental quality could be enhanced simply by increasing information and agency disclosure, however, has proved fallacious.¹⁶ Change in the type and amount of information available, without a corresponding change in the manner in which it is evaluated and used, simply has not had significant influence on agency actions.¹⁷

Because agency attention has focused exclusively on preparation of the EIS, procedures for employing it have been ignored. No duty to use the EIS has been imposed,¹⁸ and there is no way to judge the

Environmental Protection Agency). These goals result from the common training, experiences, and social environment of the agency members and the agency's external sources of support. See A. DOWNS, *INSIDE BUREAUCRACY* 43-87 (1967) (discussion of motivation of officials within organizations); H. SIMON, D. SMITHBURG & V. THOMPSON, *PUBLIC ADMINISTRATION* 55-102 (1950) (organization's mission determined by internal goals and external controls); A. WILDAVSKY, *THE POLITICS OF THE BUDGETARY PROCESS* (2d ed. 1974) (external control of agencies through budgetary process). Underlying these goals is the desire of the agency's members to continue the agency's existence and increase its budget and power. See Niskanen, *Bureaucrats and Politicians*, 18 J.L. & ECON. 617, 618 (1975) (noting theory that mission of organizations is to maximize own budget).

15. R. ANDREWS, *supra* note 6, at 153 ("[I]f environmental information could be placed before each official in the decision process along with the traditional information about proposed actions and their alternatives, it would influence the decision in the direction of NEPA's policy goals.")

16. See Andrews, *supra* note 3, at 320 (achievement of NEPA's policies not caused by implementation of its procedures); Bardach & Pugliaresi, *The Environmental Impact Statement v. The Real World*, PUB. INTEREST, Fall 1977, at 22, 24 (EIS merely procedural tool); Cortner, *supra* note 5, at 336 ("While substantive change may occur as the result of formal compliance with procedures, new procedures and rules do not necessarily change attitudes or behavior if basic agency decisions can remain the same."); Fairfax, *A Disaster in the Environmental Movement*, 199 SCI. 743 (1978) (NEPA has diverted attention from substantive change); Sax, *The (Unhappy) Truth About NEPA*, 26 OKLA. L. REV. 239 (1973) (procedural changes alone are inadequate). But see Wichelman, *Administrative Agency Implementation of the National Environmental Policy Act of 1969: A Conceptual Framework for Explaining Differential Response*, 16 NAT. RESOURCES J. 263, 279 (1976) (substantive change from NEPA's procedural innovation is occurring gradually); cf. COUNCIL STUDY, *supra* note 5, at 23, D-1 to D-4 (examples of changes in agency decisions resulting from EIS preparation).

A major difficulty in evaluating the success of NEPA has been the impossibility of determining whether the EIS, once prepared, influences decisions. See COUNCIL STUDY, *supra* note 5, at 21 ("In seeking information on this subject [influence of NEPA on agency decisions] from agencies, states, and other sources, the Council encountered mostly gray areas.")

17. See note 16 *supra*. The modest substantive changes resulting from NEPA can be attributed largely to other factors. See R. ANDREWS, *supra* note 6, at 157, 158 (delay from lawsuits and controversy as reasons for change); R. LIROFF, *supra* note 3, at 130-32 (change in personnel); Wichelman, *supra* note 16, at 280-84 (establishment of independent environmental offices within agencies). Agencies with primary missions favorable to the environment seem to make greater use of the EIS. See COUNCIL STUDY, *supra* note 5, at D-3 to D-4 (Forest Service uses EIS as basic planning document for forest lands).

18. It is arguable that NEPA created no substantive duties, but only procedures that would allow political pressure to change agency decisions. This view, however, ignores Congress's intent that the procedures be used as means to achieve substantive policy

extent to which an agency actually uses information generated in the EIS preparation process in designing its action.¹⁹ There is, moreover, no explicit requirement that agencies employ the "mitigation measures"²⁰ that must be suggested in the EIS²¹ and there is no standard for determining which suggested measures ought to be used.

Disregard for use of the EIS in implementation has contributed to its inadequacies as a scientific device.²² The EIS fundamentally should be a scientific document that collects data from a variety of sources and predicts the results of introducing new factors into an environmental system. Minimally, the scientific method requires observation, verification and criticism of hypotheses, and subsequent use of the confirmed or altered hypotheses.²³ Continuous monitoring over a long period is especially important in environmental analysis because of the numerous variables, interrelationships, and unexpected effects that accompany newly introduced factors.²⁴

None of these monitoring activities are presently required after preparation of an EIS. Observation and monitoring rarely occur,²⁵

ends. See note 3 *supra*. The EIS was meant to be a decision document that would affect the policymaking process. R. LIROFF, *supra* note 3, at 17 (draftsmen of NEPA relied on "decision documents" as models for EIS). Congress delegated to the executive branch, especially the Council and the agencies, the task of determining the mechanics of using the EIS in decisionmaking. The Council Guidelines and proposed regulations have evolved to fulfill that task under the direction of executive orders. See note 6 *supra*.

19. See note 16 *supra*.

20. See pp. 601, 607-08 *infra*.

21. See Council on Environmental Quality, NEPA Hearing Questionnaire 35 (July 1977) (on file with *Yale Law Journal*) ("Considerable testimony asserted that the EIS process where working well results in mitigation measures to minimize the harmful environmental impact of the process. There was some skepticism as to whether the mitigation is in fact always carried out.") Mitigation measures can be used in a variety of circumstances. See *Life of the Land v. Brinegar*, 485 F.2d 460, 473 (9th Cir. 1973) (new habitat for endangered bird species developed concurrently with runway extension); *Bucks County Bd. of Comm'rs v. Interstate Energy Co.*, 403 F. Supp. 805, 814 n.15 (E.D. Pa. 1975) (change in route of pipeline and location of pumping stations to minimize environmental harm); *Simmans v. Grant*, 370 F. Supp. 5, 11 (S.D. Tex. 1974) (change in route of dredged channel); cf. Watson, *Measuring and Mitigating Socio-Economic Environmental Impacts of Constructing Energy Projects: An Emerging Regulatory Issue*, 10 NAT. RESOURCES LAW. 397 (1977) (importance of mitigation of impact on public services when major energy facility is located in undeveloped area).

22. See Carpenter, *The Scientific Basis of NEPA—Is it Adequate?* 6 ENV'T L. REP. 50,014 (1976) (inadequacies of EIS as scientific device); Fairfax, *supra* note 16 (EIS has major scientific defects); Schindler, *The Impact Statement Boondoggle*, 192 SCI. 509 (1976) (EIS wanting as scientific tool).

23. See Fairfax, *supra* note 16, at 745 (proper scientific inquiry must proceed gradually, under full scrutiny of skeptical and disciplined profession).

24. See Carpenter, *supra* note 22, at 50,017-18 (development of good ecological information requires constant and lengthy observation); cf. Gelpe & Tarlock, *The Uses of Scientific Information in Environmental Decisionmaking*, 48 S. CAL. L. REV. 371, 389-412 (1974) (describing complexity of ecosystems).

25. See COUNCIL STUDY, *supra* note 5, at 54; Carpenter, *supra* note 22, at 50,017, 50,019.

and the EIS thus is not subject to scientific criticism.²⁶ Because of the impossibility of observation and criticism, predictions of the environmental impact of actions and of the relative merits of various mitigation measures included in an EIS cannot be analyzed. The EIS, therefore, is of minimal scientific value as a guide to agency action.

II. Two Responses to Failures of the Current System

A. *Judicial Imposition of a Duty to Choose the Least Adverse Alternative*

Some critics have urged that courts require agencies to choose on the basis of the EIS, from among available options, the alternative course of action that promises the least harm to the environment. This substantive response, however, is unworkable because it would override the decision of an agency that reflects its sense of mission most strongly. Such "primary" decisions between policy alternatives should be distinguished from "secondary" choices of measures to implement the primary decision.²⁷

Forcing an agency to adopt the least adverse alternative often could require that agency to choose to take no action or to recommend action by another agency.²⁸ Such choices would be contrary to the

26. See Schindler, *supra* note 22, at 509 (EISs "have formed a 'gray literature' so diffuse, so voluminous, and so limited in distribution that its conclusions and recommendations are never scrutinized by the scientific community at large").

27. See pp. 607-08 *infra*; Council Guidelines, 40 C.F.R. §§ 1500.8(a)(4)-(5) (1977); D'Amato & Baxter, *supra* note 11, at 208-22, 233-34.

Commentators arguing for judicial review of the substance of the agency decision concentrate on the primary decision. See, e.g., Leed, *The National Environmental Policy Act of 1969: Is the Fact of Compliance a Procedural or Substantive Question?* 15 SANTA CLARA LAW. 303 (1975); Wharton, *Judicially Enforcable Substantive Rights Under NEPA*, 10 U.S.F. L. REV. 415 (1976); Note, *The Least Adverse Alternative Approach to Substantive Review Under NEPA*, 88 HARV. L. REV. 735 (1975).

28. In its EIS an agency must consider the possibility of "no action," Council Guidelines, 40 C.F.R. § 1500.8 (a)(4) (1977); see *Environmental Defense Fund, Inc. v. Corps of Eng'rs*, 325 F. Supp. 749, 761 (E.D. Ark. 1971), *modified*, 342 F. Supp. 1211, *aff'd*, 470 F.2d 289 (8th Cir. 1972), *cert. denied*, 412 U.S. 931 (1973), and the possibility of alternatives outside its jurisdiction, *Natural Resources Defense Council, Inc. v. Morton*, 458 F.2d 827, 834, 835 (D.C. Cir. 1972) (Department of Interior must consider variety of alternatives to offshore oil and gas leasing in Gulf of Mexico, including ending oil import quotas, increasing nuclear development, and changing FPC natural gas pricing). When considering alternatives, an agency may be forced to look at choices that diminish its reason for existence. Consideration of such primary alternatives contrasts with the decision to select mitigation measures, which requires an agency to adjust rather than abandon its preferred course of action. Organization theory suggests that an agency's major goal is maximizing its budget, see Niskanen, *supra* note 14, at 618, and thus explains the disparity in the relative threats to an agency's mission when it selects an alternative and chooses a mitigation measure. If an agency must choose the alternative of no action or an action within the jurisdiction of another agency, the agency's budget will be reduced. On the

agency's sense of mission, since they would decrease the agency's budget and power.²⁹ Any attempt to require such choices, therefore, would be bound to encounter severe agency resistance.³⁰

A judicial requirement that an agency adopt the least damaging alternative³¹ is also unlikely because NEPA does not provide standards to guide courts in requiring such agency action. Many courts have accepted the principle that NEPA sets substantive goals for agencies,³² but no court has found that an agency's selection of a particular alternative violated those goals.³³ The absence of substantive judicial review is understandable, because NEPA does not define the weight that is to be given to environmental values in relation to other national policy goals pursued by an agency.³⁴ With the exception of cases of blatant bad faith by an agency, therefore, courts are unable to scrutinize a particular agency policy choice.

B. *The New Council Regulations*

Under the authority of an executive order,³⁵ the Council has recently proposed new regulations governing preparation of the EIS.³⁶

other hand, the choice of a particular mitigation measure may result in a larger budget and more authority, because an agency's budget often is determined project-by-project. See R. ANDREWS, *supra* note 6, at 48 (authorization for individual projects rather than for total agency budget).

29. The substantive response would be a first-best solution only if the agency's sense of mission would not be affected adversely, and if environmental values always outweighed "other essential considerations of national policy," NEPA, § 101(b), 42 U.S.C. § 4331(b) (1970). Since neither of these conditions are realistic, however, the second-best solution of structuring agency choice of mitigation measures is desirable.

30. Such agency resistance occurred when the Council attempted to limit the factors upon which an agency could rely in selecting any alternative other than the least environmentally damaging one. Agencies strongly objected to their inability to consider other factors that might be supportive of their missions. 8 ENVIR. REP. (BNA) 902 (1977); see R. ANDREWS, *supra* note 6, at 157, 158 (agencies less resistant to changing design than basic action).

31. See Note, *supra* note 27 (arguing for such judicial enforcement).

32. See, e.g., *Sierra Club v. Froehle*, 486 F.2d 946 (7th Cir. 1973) (NEPA sets substantive goals); *Environmental Defense Fund, Inc. v. Corps of Eng'rs*, 470 F.2d 289 (8th Cir. 1972), *cert. denied*, 412 U.S. 931 (1973) (possibility of substantive review); W. RODGERS, *supra* note 7, at 741 n.23 (citing cases). *Contra*, *Lathan v. Brinegar*, 506 F.2d 677 (9th Cir. 1974) (NEPA characterized as purely procedural statute).

33. COUNCIL STUDY, *supra* note 5, at 32.

34. See 42 U.S.C. § 4331(b) (1970) (agencies are "to use all practicable means" to carry out policy of NEPA, but they must do so "consistent with other essential considerations of national policy"); R. LIROFF, *supra* note 3, at 76, 84 (NEPA does not choose among possible national policies). The Council Guidelines limit themselves to the procedural aspects of NEPA. See 40 C.F.R. § 1500 (1977).

35. Exec. Order No. 11,991, 42 Fed. Reg. 26,967 (1977).

36. The existing Council Guidelines are found at 40 C.F.R. § 1500 (1977). The new Regulations have three basic purposes: reducing paperwork, minimizing delays, and securing decisions that better reflect the EIS. *Proposed Regulations*, *supra* note 4, § 1500.1. All federal agencies are to develop regulations that conform to the new regulations

The new regulations demonstrate concern with agency use of the EIS after its preparation,³⁷ but generally follow the familiar strategy of modifying agency behavior through disclosure requirements alone. First, the new regulations require an agency to produce a "public record of decision" stating how it used the EIS in its decisionmaking and what, if any, mitigation measures it adopted.³⁸ Second, the proposed regulations provide that after adopting mitigation measures, an agency has a duty to implement and enforce them.³⁹ Finally, an agency may establish a program to monitor all implemented mitigation measures and publicize their results.⁴⁰

The initial requirement, that an agency produce a record of decision, ensures that the agency will at least inform the public of how it uses the EIS. Moreover, the requirement facilitates subsequent evaluation of an agency's use of the EIS.⁴¹ Absent a substantive standard of agency decisionmaking, however, disclosure of the agency selection cannot guarantee that the selection will minimize harm to the environment. Indeed, the history of NEPA suggests that neither an increase of information prior to a decision nor disclosure of reasons after a decision will, without more, affect agency decisionmaking.⁴²

The requirement that an agency implement or enforce mitigation measures focuses on a decision that is less central to the agency's mission than its choice of a primary alternative. The requirement, therefore, is more likely to be effective⁴³ than the mandate that an agency select policies that themselves minimize environmental harm. Yet, the proposed implementation requirement relies solely on disclosure to influence the *selection* of mitigation measures; the record of decision need only contain a statement of "[w]hether all practicable means

within eight months of the final rulemaking. *Id.* § 1507.3. These agency regulations must integrate the new requirements into the basic structure of each agency's policymaking process. *Id.* § 1505.1(b).

37. See 43 Fed. Reg. 25,231 (1978) ("Most of the features described above will help to improve decisionmaking. This, of course, is the fundamental purpose of the NEPA process, the end to which the EIS is a means A central purpose of these regulations is to tie means to ends.")

38. *Proposed Regulations*, *supra* note 4, § 1505.2. This record "may be integrated into any other record prepared by the agency," *id.*, but some record must be prepared. The record must include the decision, a statement of national policy reasons that necessitated selection of an alternative other than the least damaging one, and a statement of "[w]hether all practicable means to avoid or minimize environmental harm have been adopted, and if not, why they were not." *Id.* § 1505.2(c).

39. *Id.* § 1505.3. The agency must implement mitigation measures in actions directly under its control and enforce them when a private developer or subordinate governmental unit is directly responsible for the action. *Id.*

40. *Id.*

41. See R. LIROFF, *supra* note 3, at 84, 85 (noting lack of device for measuring use).

42. See note 16 *supra* (citing sources).

43. See notes 29-30 *supra*.

to avoid or minimize environmental harm have been adopted," and if not, why not.⁴⁴ A statement listing the mitigation measures that an agency has selected will be ineffective unless governed by a standard that indicates which measures ought to have been selected.⁴⁵

Finally, the requirement that an agency establish monitoring programs reflects an awareness of two problems: the failure of agencies to implement mitigation measures they have chosen and the inadequacy of the EIS as a scientific device. The new requirement clearly responds to the failure of agencies to implement or enforce mitigation measures; agencies must at least establish programs of inspection to ensure that adopted mitigation measures are implemented. However, the new regulations leave unclear whether the monitoring program merely involves supervision of the application of mitigation measures, or whether it should instead include scientific observation of the effectiveness of the measures.⁴⁶

Scientific observation is crucial to effective utilization of the EIS. In some situations an agency will be unable to obtain all information that is relevant to its EIS before the primary decision is made, but will be able to secure that information later if it adopts a monitoring program that includes scientific observation.⁴⁷

If information based on subsequent scientific observation were reflected in a revised EIS, the agency would be more likely to make informed decisions in the future.⁴⁸ Publication of data gathered from

44. *Proposed Regulations*, *supra* note 4, § 1505.2(c). Such a statement undoubtedly will provide information so that an EIS can be more successfully scrutinized and the agency can have the benefit of more thoughtful criticism. The utility of even this information function, however, is undercut by the absence of a standard that indicates when particular mitigation measures are appropriate.

45. The proposed regulations are unable to provide standards to govern the creation and implementation of mitigation measures precisely because they fail to differentiate adequately and consistently between mitigation measures and primary alternatives. Although the proposed regulations distinguish the two in the record of decision, they are merged both in the definitions of alternatives, *id.* § 1502.14, and mitigation measures, *id.* § 1508.19. This conflation reveals a lack of appreciation for the intensity of the agency sense of mission that is present when an agency is choosing among primary alternatives, as opposed to mitigation measures. When agencies resisted the imposition of a duty to select the least adverse alternative, *see* note 30 *supra*, the draftsmen did not adopt the second-best approach of requiring adoption and implementation of mitigation measures pursuant to a substantive standard.

46. "Monitoring" is not defined in the proposed regulations.

47. The classic example of this situation is outer continental shelf oil and gas development. *See* D. KASH, *ENERGY UNDER THE OCEANS* 26-62 (1973). At the outset of exploration, little is known about the location or quantity of commercially exploitable oil and gas in relation to marine resources. As exploratory surveys, drilling, and finally production occur, further information is developed. *Id.*; *see* *County of Suffolk v. Secretary of Interior*, 562 F.2d 1368 (2d Cir. 1977), *cert. denied*, 434 U.S. 1064 (1978) (problems of delay and confusion that can arise in outer continental shelf oil and gas development when decisions are made on basis of EIS with inevitably incomplete information).

48. *See* *Carpenter*, *supra* note 22, at 50,017, 50,019.

such monitoring programs could give observers information on which to base evaluation of future projects. Moreover, publication would expose the EIS to the scrutiny of the scientific community. The value of publication, therefore, depends on the structure of monitoring programs; mere publication of the fact of implementation of mitigation measures will have minimal scientific value.

III. Recommended Amendments to the Proposed Regulations

Each of the two major responses to NEPA's failures offers important advantages; yet each also has significant deficiencies. The least-adverse-alternative approach promises a more ambitious role for the EIS, but would require an unworkable standard. The Council's proposed regulations provide a valuable public record and recognize the importance of monitoring, but they continue to rely on disclosure mechanisms to achieve substantial policy goals. A synthesis of the two responses would impose on agencies a standard for implementation of mitigation measures.

A. *Recommended Amendments to the Council's Proposed Regulations*

Agencies must be bound by a standard that governs adoption of mitigation measures in order to increase the likelihood that an agency will minimize environmental harm in implementing a primary policy decision. The standard must be sufficiently flexible to deal with the variety of situations that arise under NEPA.⁴⁹ Moreover, in order to minimize agency resistance to promoting environmental quality, the standard must not interfere with an agency's choice of primary policy goals.⁵⁰ The standard must guide agencies in the preparation and implementation of the EIS, and must permit observers to scrutinize agency compliance carefully. Such a standard can be implemented by adoption of the following amendment to the proposed Council regulations:

Agencies shall:

- (a) adopt all practicable mitigation measures available for the alternative chosen and identified as practicable in the EIS;

49. See, e.g., *Kleppe v. Sierra Club*, 427 U.S. 390 (1976) (regional plan or program for development of Northern Great Plains coal resources); *City of Davis v. Coleman*, 521 F.2d 661 (9th Cir. 1975) (freeway interchange); *Environmental Defense Fund, Inc. v. Froehke*, 473 F.2d 346 (8th Cir. 1972) (dam and channelization project).

50. See pp. 601-02 *supra* (discussing agency resistance to interference with choices among policy goals).

(b) produce a public record of decision that shows the alternative chosen and the mitigation measures adopted, and that explains why mitigation measures identified in the EIS but not adopted are impracticable;

(c) implement or enforce all mitigation measures adopted, either through the plans, designs, recommendations, and actions of the agency or through conditions on grants and licenses given to other parties;

(d) supervise implementation of the mitigation measures to ensure their use and establish a monitoring program to observe and verify the effects of mitigation measures predicted in the EIS;

(e) publicize the results of monitoring programs with comparisons of the predicted and observed effects of the mitigation measures implemented, and use those results in future, similar EISs.⁵¹

Central to such an amendment is the practicability standard. This standard corresponds to the language of NEPA⁵² and the proposed regulations themselves.⁵³ Moreover, the meaning of the term "practicable" is illuminated by its use in similar contexts in which an action is adjusted to minimize some danger without preventing achievement of the primary policy goal.⁵⁴

Three factors typically are taken into account in defining practicability: the state of the technological art, the cost of the measure, and the amount of harm avoided. If a mitigation measure is beyond the current state of the technological art⁵⁵ or if it is prohibitively ex-

51. This amendment would replace *Proposed Regulations*, *supra* note 4, §§ 1505.2-.3.

52. See NEPA, § 101(b), 42 U.S.C. § 4331(b) (1970) ("In order to carry out the policy set forth in [this Act], it is the continuing responsibility of the Federal Government to use *all practicable* means, consistent with other essential considerations of national policy, to improve [its plans to cause less harm to the environment] . . .") (emphasis added).

53. The proposed regulations already require a statement of "[w]hether *all practicable* means to avoid or minimize environmental harm have been adopted." *Proposed Regulations*, *supra* note 4, § 1505.2(c) (emphasis added).

54. The Federal Water Pollution Control Act Amendments of 1972, 33 U.S.C. §§ 1251-1376 (Supp. V 1975) [hereinafter cited as Water Pollution Control Act], require use of "the best *practicable* control technology currently available" to avoid water pollution while allowing industrial or municipal activity to continue. *Id.* § 1311(b)(1) (emphasis added). The National Traffic and Motor Vehicle Safety Act requires establishment of "practicable" safety standards to avoid harm to users of automobiles, but allows automobile manufacture and use to continue. 15 U.S.C. §§ 1392(a), (f) (1970). Remedies commonly available in nuisance law include use of practicable methods to avoid harm to public or private environments. See W. RODGERS, *supra* note 7, at 143.

55. See, e.g., *Chrysler Corp. v. Department of Transp.*, 472 F.2d 659, 673-74 (6th Cir. 1972) (under National Traffic and Motor Vehicle Safety Act state of art of passive restraints shows they are practicable); *Folmar v. Elliot Coal Mining Co.*, 441 Pa. 592, 272 A.2d 910 (1971) (no damages awarded in nuisance case because control was not technologically feasible); Water Pollution Control Act, 33 U.S.C. § 1311(b)(1) (Supp. V 1975) (practicable control technology must be currently available).

pensive,⁵⁶ it is not practicable. In all instances, there must of course be an actual harm that is avoided.

When applying the practicability standard, it is important to differentiate clearly between an agency's discretionary selection of alternative courses of action and the nondiscretionary choice of mitigation measures. This can be accomplished by Council adoption of the following definitions:

(a) The choice of alternatives requires consideration of the goals the agency wishes to achieve and the major outlines of the agency action. The choice includes:

- (1) whether to take no action or some action; and
- (2) whether to take an action within the agency's jurisdiction or to recommend that another agency or institution be responsible for achieving the desired results.⁵⁷

(b) Mitigation measures include:

- (1) changing the design or details of an alternative to minimize environmental harm;

56. See, e.g., *CPC Int'l, Inc. v. Train*, 540 F.2d 1329, 1341-43 (8th Cir. 1977) (in Water Pollution Control Act litigation, cost helps define practicability); *Renken v. Harvey Aluminum, Inc.*, 226 F. Supp. 169, 174 (D. Or. 1963) (nuisance law requires remedy unless defendant can show it is prohibitively expensive).

A mitigation measure would be unjustifiably expensive if its cost outweighed its benefits. Admittedly, the art of cost-benefit analysis is imprecise. See generally Rosen, *Cost-Benefit Analysis, Judicial Review, and the National Environmental Policy Act*, 7 ENV'T L. 363 (1977). Common problems include establishment of an appropriate discount rate for future benefits and costs, valuation of nonhuman lives and ecological diversity, and measurement of the cost and risk of possible future catastrophes. See B. ACKERMAN, S. ROSE-ACKERMAN, J. SAWYER & D. HENDERSON, *THE UNCERTAIN SEARCH FOR ENVIRONMENTAL QUALITY* 104-46 (1974) (review of such problems); Yellin, *Judicial Review and Nuclear Power*, 45 GEO. WASH. L. REV. 969 (1977) (difficulties of assessing cost of unlikely, but disastrous event).

An agency, however, often will be able to measure benefits or costs by the decreased or increased distance users of one resource will have to travel to enjoy a similar resource, or by the costs of producing a similar resource in a different locale if no comparable resource is available. See B. ACKERMAN, S. ROSE-ACKERMAN, J. SAWYER & D. HENDERSON, *supra*, at 104-19 (making such measurements). In other situations an agency will not have to perform a cost-benefit analysis, but instead can defer to a congressionally recognized special value in the continued existence of an endangered species, see Endangered Species Act, 16 U.S.C. § 1536 (Supp. V 1975) (requiring all federal agencies to avoid jeopardizing existence of species on endangered list), or the preservation of parkland, see *Citizens to Preserve Overton Park, Inc. v. Volpe*, 401 U.S. 402 (1971) (interpreting statute to require construction of road so as to preserve park). The task of measurement often will be difficult, but agencies ought to grapple with the values at stake rather than arbitrarily discard an available mitigation measure. Furthermore, such analysis will expose the agency's reasoning to review and criticism. See pp. 608-10 *infra*.

57. Alternatives include suggestions of mass transit rather than highways, flood plain zoning rather than dam construction, and energy conservation rather than development of federal coal resources. Cf. Council Guidelines, 40 C.F.R. § 1500.8(a)(4) (1977) (using similar definition).

- (2) requiring application of better pollution control technology;
- (3) changing the location of the action within a region;
- (4) repairing or restoring the affected environment;
- (5) minimizing the adverse effects during the action through preservation and maintenance; and
- (6) compensating for adverse effects by providing replacements or substitutes for the destroyed environment.⁵⁸

Moreover, the amendments explicitly provide for inclusion of scientific observation in monitoring programs and for use of information derived from monitoring programs in future EISs. The monitoring programs should evaluate the predicted effects of mitigation measures and should therefore include collection of data about the impact of an action and the ameliorating effects of the mitigation measures.⁵⁹

Monitoring programs should extend for periods sufficient to discover the effects of mitigation measures.⁶⁰ An agency can change measures during the course of an action upon discovering that a mitigation measure is not producing the predicted results. Data from the monitoring programs should be published in a form that allows comparison of the hypothesized value of the measures with their observed value.⁶¹ Adoption of these amendments will give agencies guidance for making a reasoned choice on a public record from among suggested mitigation measures.

B. *Implications for Judicial Review*

In reviewing alleged violations of the practicable mitigation standard, courts will confront different situations than in current NEPA cases. Not only the informational adequacy of the EIS, but also agency action based upon the relevant information will be scrutinized.⁶²

58. These amendments would replace *Proposed Regulations*, *supra* note 4, § 1508.19.

59. Carpenter, *supra* note 22, at 50,019.

60. The current state of the art does not include neat calculations of the time necessary for observation of ecosystems. *See id.* at 50,017 (observation should continue for "a number of years, even decades"). Nonetheless, preparation of an EIS at least should be used to improve the state of the art.

61. Such a format will facilitate requisite scientific criticism. *See* Schindler, *supra* note 22.

62. Bardach and Pugliaresi, *supra* note 16, argue that judicial review of agency preparation of the EIS ought to be precluded because such review makes agencies so defensive that they prepare the EIS solely to satisfy courts rather than for use in agency decisions. By focusing judicial review not solely on preparation of the EIS, but also on its evaluation and use, the standards proposed in this Note decrease the possibility that a "defensive" agency can prepare a merely pro forma EIS. The EIS becomes important

Yet, the focus on practicable mitigation measures rather than on the choice of alternative courses of action should make expanded review manageable.⁶³

Ample legal authority exists for the more comprehensive judicial review of agency decisions that would take place under the amended standards proposed in this Note.⁶⁴ By increasing the visibility of agency decisions and by providing more information to a reviewing court, the proposed amendments should facilitate the judicial function. The standards, moreover, would strengthen judicial review in two significant ways: procedural review would be more thorough, and substantive review would produce greater agency compliance with the goals of NEPA.

1. *Procedural Review*

Under the amended regulations courts still would engage in traditional procedural review to ensure that an agency has considered all relevant factors in its EIS.⁶⁵ Consideration and analysis of all appropriate mitigation measures would be even more important because

both in the initial decision among alternative courses of action and in subsequent mitigation decisions. Because an agency will be allowed to change or manipulate cost-benefit calculations in its EIS only with great difficulty after preparation of the EIS is completed, agencies will have strong incentives to prepare the EIS carefully. Moreover, because the standards proposed in this Note will increase information available on the record, courts will be better able to evaluate the validity of each EIS as well as the decision based on it.

63. An agency first would choose from among national priorities through the selection of an alternative course of action. But courts then would require the agency to minimize the sacrifice of another national priority—the protection of the environment—through the use of all practicable mitigation measures, and compensate users of the environmental resource destroyed either through minimization of harm or through replacement of the resource.

64. The record of decision produced by an administrative agency, such as the record proposed in this Note, is certainly reviewable. *Citizens to Preserve Overton Park, Inc. v. Volpe*, 401 U.S. 402, 410 (1971); *Association of Data Processing Serv. Organizations v. Camp*, 397 U.S. 150, 157 (1970); *Abbott Laboratories, Inc. v. Gardner*, 387 U.S. 136, 140, 141 (1967); see *County of Suffolk v. Secretary of Interior*, 562 F.2d 1368, 1383, 1384 (2d Cir. 1977), *cert. denied*, 434 U.S. 1064 (1978) (review of similar record of decision used in oil and gas lease sale).

Under the proposed regulations the Council is to review all EISs that are found objectionable by another commenting agency. *Proposed Regulations*, *supra* note 4, § 1504. However, Council review of an EIS that another agency has found wanting will be limited to matters of national importance—primarily the selection of alternative courses of action. *Id.* §§ 1504.2, .3(e)(4). In reviewing such referrals, the Council will be limited to the remedies of publicity and persuasion. *Id.* § 1504.3(e). Thus Council review of the EIS is an additional method of correction of the few environmentally unsound projects that rise to the level of national importance, rather than a mechanism that preempts review in the courts.

65. See note 10 *supra* (traditional procedural review limited to ensuring consideration of relevant information).

the EIS is designed to provide the basis for selecting the measures. Courts also might have to require consideration of data developed in earlier monitoring programs if an agency fails to take that information into account in making later decisions. If a mitigation measure adopted on the record of decision is not implemented, or a monitoring program is not established and publicized, a court could order the necessary performance.

2. *Substantive Review*

A more problematic case for judicial review will arise when an agency fails to choose on its record of decision a mitigation measure suggested in the EIS. Some courts have held that review of the substance of agency decisions within the standards of NEPA is possible, but have refrained from such review.⁶⁶ The scope of review under the Council's proposed regulations will be changed somewhat by the presence of a record of decision that is presumed to be reviewable.⁶⁷ Yet, the Council's proposed regulations fail to provide a standard of review for use by the courts.

Under the recommended amendments, in contrast, a court would enjoin further action if an agency failed to adopt a mitigation measure defined as practicable in the EIS. An agency could avoid adoption of such mitigation measures only if it could show that a change in the state of the art made another mitigation measure more desirable⁶⁸ or that changed environmental conditions made the mitigation measure unnecessary.⁶⁹ An agency, therefore, could justify a failure to adopt a mitigation measure by showing an objective change in the underlying data, but not by manipulating the cost-benefit analysis already performed. The agency would be bound by its EIS⁷⁰ since courts would require the agency to use the EIS to design its action.

66. See *Environmental Defense Fund, Inc. v. Corps of Eng'rs*, 492 F.2d 1123 (5th Cir. 1974); *Environmental Defense Fund, Inc. v. Corps of Eng'rs*, 470 F.2d 289 (8th Cir. 1972), *cert. denied*, 412 U.S. 931 (1973).

67. See note 64 *supra*.

68. For instance, an agency could use a more advanced pollution control device, but it would not be free to use none when the EIS had suggested otherwise.

69. For instance, destruction of the fish in a river could make construction of a fish ladder around a dam unnecessary, or discovery of another population of an endangered species could make preservation of the population threatened by the agency action unnecessary.

70. The EIS is prepared first by a separate environmental office within most agencies. See Wichelman, *supra* note 16, at 280-83. Under this proposal the EIS would then be used by agency decisionmakers to design the agency action. This would be an improvement over the current system in which the EIS is frequently ignored by agency decisionmakers. See Bardach & Pugliaresi, *supra* note 16 (EIS not used by agency decisionmakers).

Conclusion

Full implementation of NEPA by agencies must progress through three phases: interpretation of NEPA's procedural message, formal compliance with its procedures, and integration of NEPA's policy into agency decisions.⁷¹ Most agencies have entered at least the formal compliance phase. The EIS has been the tool through which much of this progress has been achieved.

A change in the focus of Council guidance, agency implementation, and judicial review must take place in order to move agencies from formal compliance with NEPA to integration of its goals with primary agency policy decisions. Part of the change must come from employment of the EIS in the earliest stages of agency planning. The other source of change must be reliance on the EIS during implementation of the agency's activities. Information gathered in the EIS is valuable only if the agency uses it to design and control its actions.

71. Wichelman, *supra* note 16, at 265-67.

Part 3
Environmental Litigation

ENVIRONMENTAL LITIGATION: AN ANALYSIS OF BASIC STRATEGIES, PROCEDURES, SUBSTANTIVE RIGHTS AND THEIR EFFECTS†

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Environmental litigation did not have much meaning twenty years ago. Most law schools only recently initiated courses in Environmental Law. Even now, analysis of the term environmental litigation is difficult. Important social, environmental and economic values involved in litigation regarding the environment constantly change and create not only new substantive rights but new forums. Like everything else in the environment, these values will continue to change.

As in every area of the law, the need to reach final decisions in each case is an indispensable part of the environmental litigation process. For this reason, it is valuable to evaluate the strategies, procedural rules and substantive rights involved in such litigation. Whether the analysis is of assistance because it prepares the attorney for problems or shows errors which can be avoided, it is worthwhile to recognize that the attorney's analysis of the case often determines the outcome. The attorney, therefore, must interpret the client's environmental rights in terms of standing, available procedures, and selection of a forum and must present a case based upon existing information and law.

The importance of an attorney's role in interpreting a confusing environment of facts and law is best described by the story of the warrior who consulted the Oracle of Apollo at Delphi as to whether it would be safe for him to proceed to a particular war. The oracle responded:

"THOU SHALT GO AND THOU SHALT RETURN
NEVER BY WAR SHALT THOU PERISH."

The warrior (without consulting an attorney) decided that a comma should be placed after the word "RETURN" as follows:

"THOU SHALT GO AND THOU SHALT RETURN,
NEVER BY WAR SHALT THOU PERISH."

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The warrior proceeded to war, but did not return. Thus, he should have placed the comma after "NEVER." The oracle's pronouncement should have been interpreted:

"THOU SHALT GO AND THOU SHALT RETURN NEVER,
BY WAR SHALT THOU PERISH."

The foregoing shows the need for proper interpretation of pronouncements. Different results can be obtained by different interpretations of the same law and facts and environmental litigation can vary by virtue of the strategies, procedures, and substantive interpretations relied upon by the parties.

THE NATURE OF ENVIRONMENTAL LITIGATION

Although it is possible to trace litigation regarding protection of the environment back to the English common law,¹ the term "environmental litigation" generally relates to the litigation commencing in the late 1960's for the protection of the environment.² Environmental litigation was then, and today remains, part of a social movement whose goals are protection of the environment for present and future generations.³ Like other social movements—such as the trade union movement⁴ and the civil rights movement⁵—environmental protection values have been codified by legislation.⁶ H.L. Mencken said that "Americans feel that every question can be answered by passing a law; either for it, or against it."⁷ Whether or not this is a legitimate description of the legislative process, it is an accurate account of the subject known as "Environmental Law."⁸ In the late 1960's, environmental litigation involved the application of existing property law and broad consti-

1. See generally William Aldred's Case, 77 Eng. Rep. 816 (KB 1610). See also F. BOSSELMAN, D. CALLIES & J. BANTA, *THE TAKING ISSUE* 51-81 (1973) (publication of the Council on Environmental Quality).

2. ENVIRONMENTAL LAW INSTITUTE, *FEDERAL ENVIRONMENTAL LAW* 1-18 (E. Dolgin & T. Guilbert eds. 1974).

3. See *LAND USE CONTROLS IN THE UNITED STATES: A HANDBOOK ON THE LEGAL RIGHTS OF CITIZENS BY THE NATURAL RESOURCES DEFENSE COUNCIL, INC.* 2-3 (Moss ed. 1977).

4. See generally *THE DEVELOPING LABOR LAW* 3-59 (C. Morris ed. 1971).

5. See generally B. SCHLEI & P. GROSSMAN, *EMPLOYMENT DISCRIMINATION LAW* VII-XIII (1976).

6. See generally ENVIRONMENTAL LAW INSTITUTE, *FEDERAL ENVIRONMENTAL LAW* 1-18 (E. Dolgin & T. Guilbert eds. 1974).

7. This quote has been attributed to H.L. Mencken. See generally H. MENCKEN, *THE AMERICAN LANGUAGE* (1977).

8. See generally F. BOSSELMAN, D. FEURER & C. SIEMON, *THE PERMIT EXPLOSION* 19-20 (1976) [hereinafter cited as *THE PERMIT EXPLOSION*].

tutional doctrines by groups and individuals to challenge certain decisions adversely affecting the environment.⁹ The issue of whether there existed a constitutional right to a clean and safe environment¹⁰ was never really resolved by the courts because legislatures created a matrix of protective laws at the municipal, county, state and federal levels.¹¹

While this article deals with environmental litigation, it is incorrect to suggest that all environmental issues are resolved solely by environmental litigation before administrative or judicial tribunals. Since environmental law results from a social movement, many questions have been, and will continue to be, resolved not only by administrative agencies and the courts but by the combined legislative, economic, and political processes which form the basis for decisionmaking in a pluralistic society.¹² The effect of these varied means for solving environmental problems is the creation of a multitude of options for the attorney representing a client in an environmental matter. Before one acts, these options must be evaluated carefully to determine whether the choice of forum and the tactics used will ultimately be in the client's best interest. These considerations are of equal importance whether the client be a project's proponent or foe.

THE NATURE OF THE PARTIES AND THEIR ABILITY TO SEEK RELIEF

An attorney's initial inquiry should be an evaluation of the parties and the forum in which their rights can most effectively be litigated. It is often easy to initiate suit in the wrong forum and only later find that an alternative forum would have been more desirable.

Many project opponents have depleted their financial resources in an initial forum only to find that they are unable to continue their opposition in an alternate forum. Initial administrative decisions, which may be made after long and costly hearings, often can be appealed to a higher level and then reversed.¹³ In addition, there are

9. See *Texas v. Pankey*, 441 F.2d 236, 240 (10th Cir. 1971).

10. Cf. *Illinois v. City of Milwaukee*, 406 U.S. 91, 104-07 (1972) (application of "federal common law" to pollution of interstate waters).

11. See *THE PERMIT EXPLOSION*, *supra* note 8, at 1-4.

12. For a good example of these processes see Sitomer, *How Coastal Towns Fight Off-shore Oil Probes*, *Christian Science Monitor*, Aug. 27, 1975, at 11, col. 3.

13. See generally *Calvert Cliffs' Coordinating Comm., Inc. v. United States Atomic Energy Comm'n*, 449 F.2d 1109 (D.C. Cir. 1971); *THE PERMIT EXPLOSION*, *supra* note 8, at 4-5 (demonstration of the problem and recommended solutions to the lack of coordination in the present system's appellate review of land use controls).

cases in which the effect of a successful decision, even if not reversed by the courts, can be eliminated by applying a new criteria to the project which was not involved in the initial decisionmaking process. For example, approval of a zoning permit, after extended and costly litigation, may still not prevent a project from being attacked as a public nuisance.¹⁴

Proponents of a project do not always have the opportunity to select the forum of their choice but must proceed through the various administrative permit procedures which regulate their project. They must initially be aware of the multiple permits required and anticipate the defenses available to each permit's approval. Obviously, this preliminary phase must include an evaluation of all applicable environmental laws in order to avoid a subsequent encounter with unanticipated proceedings, large financial burdens, and ultimately, the very ability to proceed.¹⁵ For example, a developer involved in a wetland area is charged with knowledge of the necessary federal permits in addition to those required by state and local governments. Failure to adequately analyze the required permits could result in long and costly litigation to obtain a single local zoning permit which may ultimately require commitment to a project which is prohibited by state or federal law.¹⁶ Financing costs alone make it unwise to approach any project without trying to evaluate all the conceivable permits and regulations that could be required.

To properly evaluate relevant environmental laws, it is important to determine the nature of those interested or affected by a particu-

14. See *Gardner v. Sailboat Key, Inc.*, 295 So. 2d 658, 661 (Fla. Dist. Ct. App. 1974) (court confirmed that public nuisance pursuant to state statute could exist notwithstanding compliance with local zoning codes and the issuance of zoning code permits).

15. *THE PERMIT EXPLOSION*, *supra* note 8, at 20.

16. A strange illustration of the uncertainty that a local or state permit will insure a federal permit is seen in the case of *Askew v. Gables-By-The-Sea, Inc.*, 333 So. 2d 56, 57-61 (Fla. Dist. Ct. App. 1976). A developer obtained a state court order requiring issuance of a state dredge and fill permit and the state was found after granting the state permit to have improperly objected to issuance of a federal dredge and fill permit. The federal permit was denied, although the state permit had been granted. A state court was subsequently asked to find and did find that the unusual facts involving the state's actions required the state to institute condemnation proceedings as to the property which could not be utilized without the federal permit involved. *Id.* at 61.

Most environmental agencies will allow amendments to permit applications. Proposed projects may be substantially modified to overcome specific agency objections which may not eliminate all environmental concerns. Thus opponents may also prevail in litigation regarding permits and find that modifications still enable a developer to obtain permits for a similar project.

lar project. A project's proponent or developer should attempt to analyze various interests and determine who will benefit from the proposed project, who will be or may perceive that they will be adversely affected by the proposed project, and who will be motivated to support or oppose the project for economic, political, social, environmental or psychological reasons. The foregoing interests are as important to evaluate because of their impact, as are the jurisdictional interests of the local, state, and federal regulatory agencies.¹⁷

For example, The National Environmental Policy Act¹⁸ (NEPA) requires that an environmental impact statement be prepared regarding federal permits which can have a significant effect upon the human environment.¹⁹ Nevertheless, federal agencies have established standards or "thresholds" to determine whether an environmental impact statement must be prepared. The thresholds used are not always consistent and depend more upon the interest groups which are affected by the project than the agencies established to enforce the laws. A specific demonstration of this inconsistency was the decision by the United States Department of Transportation and other federal agencies that an environmental impact statement was necessary in order to issue construction permits for bridges linking an island development project to an adjacent Florida community.²⁰ The same federal agencies found that it would not be

17. Most agencies are limited by their statutory authority as to the scope of environmental protection which they may regulate. This should be evaluated by all interested parties prior to litigation in order to determine whether litigation can resolve the problems involved.

18. The National Environmental Policy Act of 1969, 42 U.S.C. §§ 4321-4347 (1970 & Supp. V 1975).

19. *Id.* § 4332 provides that:

The Congress authorizes and directs that, to the fullest extent possible: (1) the policies, regulations, and public laws of the United States shall be interpreted and administered in accordance with the policies set forth in this chapter, and (2) all agencies of the Federal Government shall —

(C) include in every recommendation or report on proposals for legislation and other major Federal actions significantly affecting the quality of the human environment, a detailed statement by the responsible official on —

- (i) the environmental impact of the proposed action,
- (ii) any adverse environmental effects which cannot be avoided should the proposal be implemented,
- (iii) alternatives to the proposed action,
- (iv) the relationship between local short-term uses of man's environment and the maintenance and enhancement of long-term productivity, and
- (v) any irreversible and irretrievable commitments of resources which would be involved in the proposed action should it be implemented.

20. Department of Transportation, United States Coast Guard, Three Islands Development Hallandale and Hollywood, Florida: "Preliminary Environmental Impact Statement

necessary to prepare an environmental impact statement regarding construction of a series of new bridges composing the Florida Overseas Highway linking Key West and other Florida Keys to the mainland.²¹

Thus, an analysis of the groups affected by an environmental project and their motivations for involvement is important because it can suggest the type of permits that may be necessary and the type of proceedings which may be involved. That determination is possible because some interest groups may have the ability to litigate questions in the courts while others may be unable to do so. Inability to litigate in the courts may result in groups utilizing other methods and alternatives in their opposition to a project. The result is that an analysis of the interest groups likely to be affected by a project is an important means of evaluating the type of administrative and judicial proceedings which may be involved in obtaining approval necessary for the project.

Factors which motivate parties interested in environmental matters often relate to problems which are common or shared by other members of the public.²² The role of any adjudicatory body, be it agency or court, is that of a forum for resolving specific cases or controversies. Because courts are reluctant to resolve policy questions without a reason to do so,²³ there are adjudicatory definitions of interests of parties in terms of their right to appear before the forum and present a question.²⁴

Traditionally, a complaining party had to have some property

Pursuant to Section 102(2)(c) PL 91-190" Coastguard No. 3271/3258/3259 (undated). The Coast Guard as lead agency determined that preparation of an environmental impact statement was required.

21. The Florida Keys Overseas Highway bridges have been determined not to require an environmental impact statement in a number of Public Notices issued on a bridge-by-bridge basis. The National Environmental Policy Act requires the preparation of a "negative declaration" where an environmental assessment indicates that the project will have no significant impact on the environment. It must include an appraisal documenting the agency's reasons for concluding that no statement is required. 38 Fed. Reg. 1699 (Feb. 16, 1973) *amending* 40 C.F.R. §6.25(a) (1972); *see* *Scientists' Inst. For Public Information, Inc. v. United States Atomic Energy Comm'n*, 481 F.2d 1079, 1094-95 (D.C. Cir. 1973).

22. *Cf. Sierra Club v. Morton*, 405 U.S. 727, 739-40 (1972) (requiring that the common nature of interests be recognized only where a "special interest" is alleged so as to support standing). *See* Jaffe, *Standing to Sue in Conservation Suits*, in *LAW AND THE ENVIRONMENT* 123, 131 (M. Baldwin & J. Page eds. 1970).

23. No less a result is required by article III of the United States Constitution. U.S. CONST. art. III, § 2; *Berger, Standing to Sue in Public Actions: Is It a Constitutional Requirement?*, 78 YALE L.J. 816, 818 (1969).

24. Scott, *Standing in the Supreme Court: A Functional Analysis*, 86 HARV. L. REV. 645, 646 (1973).

interest affected by the outcome of the decisionmaking process.²⁵ Since environmental interests are usually common or shared, it is often difficult to determine the unique nature or interest of a party trying to obtain environmental protection. Environmental interests and the results of environmental litigation have been, and will continue to be, affected by legal doctrines that define the right of parties to appear before a specific forum.²⁶ Whether or not relief is available to an opponent of a project often determines which forum, administrative, judicial, or in certain cases, political, will be used.²⁷

For both sides in an environmental controversy it is important to assess environmental litigation in terms of those concepts or defenses which will be raised to bar a party from litigating. Those concepts affect the outcome of environmental litigation and play an important role in determining which forum will be used. Set forth below is an analysis of some of the more important concepts which relate to the substantive interests of the parties in environmental litigation, the timing of their actions, and strategies which can be utilized to obtain relief.

The Standing Question—The Right of Parties to Invoke Jurisdiction and Substantiate their Ability to Redress an Injury Capable of Being Proved

The question of standing is one of the most difficult issues in environmental litigation.²⁸ Although an objector's lack of standing can limit judicial remedies, it does not necessarily eliminate the objection to a project. Inability to litigate may be a two-edged sword because it forces opponents of a project to utilize other forums when they lack standing to litigate in the courts. Thus, the ability to utilize the courts may determine whether objectors will resort to the remedies available through legislation and politics or

25. For an interesting analysis of the changing nature of property interests, see Costonis, *The Disparity Issue: A Context for the Grand Central Terminal Decision*, 91 HARV. L. REV. 402 (1977).

26. Cf. *Warth v. Seldin*, 422 U.S. 490, 508 (1975). In *Warth*, the Court denied standing to groups and nonresident individuals because they did not "allege specific, concrete facts demonstrating" that they were harmed and would benefit "from the court's intervention." *Id.*

27. Thus, selection of choice of a forum must include an analysis of the probability of standing. See W. RODGERS, *ENVIRONMENTAL LAW* 23-30 (1977).

28. See Carmichael, *Some Jurisdictional and Related Problems in Environmental Litigation*, 1 *Environmental Litigation* 117, 122 (July 17-22, 1977) (ALI-ABA Course of Study Materials).

to the regulatory and rulemaking functions of the agency process.²⁹

In recent years, the tendency has been to codify environmental protection rights and to recognize that such codification is meaningless without the standing to pursue the right.³⁰ Thus, many federal statutes confer standing as a means of insuring that substantive provisions will be enforced.³¹

Because such statutory rights are not always available to opponents of a project,³² judicial standing tests remain important. The most significant standing test was articulated by the United States Supreme Court in *Sierra Club v. Morton*.³³ The Sierra Club, without alleging any specific use or harm to its interests, attempted to test the concept of whether it would have standing to protect natural resources of the Mineral King Valley in the Sierra Nevada Mountains from a proposed development by Walt Disney Enterprises, Inc. The Sierra Club alleged that the project would adversely affect, if not destroy, the park's scenery, natural and historic objects and wildlife for future generations.³⁴ The Court, however, held that the Sierra Club lacked standing.³⁵ It articulated the test to establish standing by noting what had not been alleged.

The Sierra Club failed to allege that it or its members would be affected in any of their activities or pastimes by the Disney development. Nowhere in the pleadings or affidavits did the Club state that its members use Mineral King for any purpose, much less that they use it in any way that would be significantly affected by the proposed actions of the respondents.³⁶

The Court in *Sierra Club* also rejected the argument that natural objects should have standing,³⁷ despite the forceful dissent by Jus-

29. Thus, standing can be viewed as a determination of whether judicial relief may be available, but is not determinative of whether opponents will obtain a forum for opposition.

30. See W. RODGERS, ENVIRONMENTAL LAW 75 (1977). "In recent years, Congress has acted repeatedly to give citizens an enforcement role under the environmental laws." *Id.* at 75.

31. See, e.g., Toxic Substances Control Act § 20, 15 U.S.C.A. § 2619(a) (Supp. 1977); Federal Water Pollution Control Act, 33 U.S.C. § 1365(a) (Supp. V 1975); Clean Air Act Amendments of 1977, 42 U.S.C.A. § 7604(a)-(e) (Supp. 3 1977 & Supp. 4 1978).

32. The National Environmental Policy Act of 1969, 42 U.S.C. §§ 4321-4347 (1970 & Supp. V 1975) does not contain a citizen's suit provision. See *United States v. Students Challenging Regulatory Agency Procedures*, 412 U.S. 669, 689-90 (1973).

33. 405 U.S. 727, 738-40 (1972).

34. *Id.* at 734.

35. *Id.* at 741.

36. *Id.* at 735.

37. See *id.* at 738. The Sierra Club felt that harm to natural objects such as trees, rocks, and animals should create standing regardless of injury to the plaintiff.

tices Douglas and Blackmun to the contrary.³⁸ The matter has not been seriously pursued, however, because the Supreme Court did recognize that standing was available if an "injury in fact" test was met.³⁹ The Court noted that an "injury in fact" sufficient to establish standing under section 10 of the Administrative Procedure Act could be established by pleading that changes in use would destroy the environment.⁴⁰ The Court rejected arguments that aesthetic and environmental interests could be distinguished from economic well-being, or that environmental interests shared by many were less deserving of legal protection.⁴¹ The Court however, held that meeting the "injury in fact" test requires more than an injury to a cognizable interest; the party seeking relief must be among those injured.⁴²

It is important to carefully evaluate the standing issue because it will be raised often. Although other articles in this issue cover the more recent case law developments,⁴³ the practical question which remains is how to allege and prove standing. The best procedure to obtain standing is to utilize the "injury in fact" test language in *Sierra Club*. This requires three principal allegations: first, that a proposed use will destroy the environment; second, that the objecting party uses the area of the environment involved; and third, that the proposed use, because of its environmental destruction, will prevent the objector's use and thereby cause direct and substantial injury to the objector.

Even where Congress and state legislatures have provided for statutory standing through "Citizen Suit" provisions which ensure that the citizen's right to sue is judicially recognized,⁴⁴ alleging the "injury in fact" standing requirements of *Sierra Club v. Morton* is a worthwhile precaution.⁴⁵ As a result of the tendency of advocates to raise the standing defense and to assert that the *Sierra Club v.*

38. *Id.* at 741-42 (dissenting opinion).

39. *Id.* at 734-39.

40. *Id.* at 734.

41. *Id.* at 738-39.

42. *Id.* at 734-35.

43. See Skillern, *Private Environmental Litigation: Some Problems and Pitfalls*, 9 ST. MARY'S L.J. 675, 713-29 (1978).

44. There is authority which supports the conclusion that statutory citizens suit provisions "should be read as doing away with the necessity for the normal 'injury in fact' standing allegations." W. RODGERS, *ENVIRONMENTAL LAW* 76-77 (1977).

45. In one statutory provision which confers standing, a citizen is defined as "a person or persons having an interest which is or may be adversely affected." Federal Water Pollution Control Act Amendments of 1972, 33 U.S.C. § 1365(g) (Supp. V 1975). Thus, rather than argue that such a statutory provision does not require an injury in fact, it is best to allege such an injury.

Morton test applies even where statutory standing exists,⁴⁶ it is advisable to establish a substantial interest in the outcome of the case and injury in fact, even if an appropriate statutory standing provision exists.

Allegations of standing should be detailed even though many jurisdictions under the liberal rules of pleading do not require that a party allege detailed facts which will justify standing.⁴⁷ It is worthwhile to allege injury in fact and to carefully examine the facts relating to standing from the outset of an environmental case for several reasons. Primarily such allegations focus early attention on the need to obtain information relating to standing and thereby enable action to obtain additional proof of standing.⁴⁸ In addition, detailed allegations may act as a deterrent to dilatory motions; at the least, such allegations will make it difficult for a court to ignore the possibility of an appellate court reversal of any dismissal for lack of standing. In many environmental cases, detailed allegations may be verified and assist in later efforts to obtain temporary or permanent injunctive relief and in support of motions for summary judgment.⁴⁹

The problem, however, is not merely alleging standing but proving it. The Supreme Court has ruled that it will not allow ingenious pleadings to circumvent the need for establishing a case or controversy.⁵⁰ As a result, this may entail substantial delay in obtaining the proof necessary to withstand motions for summary judgment which claim that the controversy contains no genuine issue of fact. The type and duration of delay necessary to obtain environmental evidence must therefore be evaluated in terms of its costs and in terms of the doctrine of laches.

46. This is due to the natural desire of defendants to take advantage of what has been perceived as an attempt by the "Burger Court" to block liberal standing rules. See Chayes, *The Role of the Judge in Public Law Litigation*, 89 HARV. L. REV. 1281, 1304-05 (1976).

47. C. CLARK, *HANDBOOK ON CODE PLEADING* 225-49 (1947).

48. In *United States v. Students Challenging Regulatory Agency Procedures*, 412 U.S. 669, 689-90 (1973), the majority noted that summary judgment would be the appropriate method to test the truth and proofs of the plaintiff's factual standing assertions and that a motion to dismiss was not the appropriate procedure. Thus, the complaint may be supplemented, assuming a motion for summary judgment is not filed simultaneously with a motion to dismiss thereby presenting the same issue early in a case.

49. This would be a wise precaution in view of the decision in *United States v. Students Challenging Regulatory Agency Procedures*, 412 U.S. 669, 689-90 (1973).

50. *Id.* at 688, where the Court stated: "Of course, pleadings must be something more than an ingenious academic exercise in the conceivable." *Id.* at 688.

The Laches Defense—Finding the Evidence and Proceeding to Court in Time

The general rule is that the defense of laches is not favored by the courts in environmental law suits.⁵¹ Nevertheless, as with any general rule, there are exceptions.⁵²

Courts have applied laches as a defense in environmental litigation where parties were aware of an action complained of and delayed unnecessarily.⁵³ The question of awareness relates not only to the date of the action complained of, but also the relevant period of a particular plaintiff's interests in a matter. Some state courts have calculated the laches bar by using the date when it became reasonable for a plaintiff to act upon, or complain of a wrong, rather than the time when the wrong occurred.⁵⁴ The Fifth Circuit has utilized "three independent criteria" which must be met before laches can be applied: (1) a delay in asserting a right or claim; (2) the delay was not excusable; and (3) there was undue prejudice to the party against whom the claim is asserted.⁵⁵

Even where standing exists, there are often delays prior to litigation. Frequently, the public nature of environmental problems encourages opponents to delay taking effective action due to the hope or belief that general opposition will persuade proponents of a project to improve or abandon the project.⁵⁶ An alternative source of delay exists when litigation cannot be resolved until there has been extensive discovery to obtain proof of the alleged injury in fact.⁵⁷ Delay for such purposes, while necessary, may be used by a project proponent to preclude any relief through the assertion of a laches

51. See *Steubing v. Brinegar*, 511 F.2d 489, 495 (2d Cir. 1975); cf. Note, *The Application of the Doctrine of Laches in Public Interest Litigation*, 56 B.U.L. REV. 181, 182 (1976).

52. See *City of Rochester v. United States Postal Serv.*, 541 F.2d 967, 977 (2d Cir. 1976).

53. *Save our Wetlands, Inc. v. United States Army Corps of Eng'rs*, 549 F.2d 1021, 1026 (5th Cir.), cert. denied, 98 S.Ct. 126 (1977); see *Ecology Center v. Coleman*, 515 F.2d 860, 867 (5th Cir. 1975); *Clark v. Volpe*, 342 F.Supp. 1324 (E.D.La.), aff'd, 461 F.2d 1266 (5th Cir. 1972).

54. See *Moore v. State*, 553 P.2d 8, 15-17 (Alaska 1976) (court referred to the "two independent tests" as an excusable delay by a plaintiff and resulting undue prejudice to the defendant).

55. *Save our Wetlands, Inc. v. United States Army Corps of Eng'rs*, 549 F.2d 1021, 1026 (5th Cir.), cert. denied, 98 S. Ct. 126 (1977).

56. This is a result of the common nature of most environmental problems and the typical human response that a problem may disappear if ignored or may be resolved by someone else. But see *Moore v. State*, 553 P.2d 8, 15-17 (Alaska 1976) (where defense of laches is asserted, public interest nature of lawsuit helps balance the equities in favor of plaintiff).

57. This is especially true due to proof problems and the technological complexity of most environmental controversies. See W. RODGERS, ENVIRONMENTAL LAW 5-14 (1977).

defense. Where a project has been substantially completed, a court could translate its reluctance to act in terms of the doctrine of laches.⁵⁸

It appears that the defense of laches can be segmented, however, so as to preclude only certain relief. In the "segmentation approach" to laches, courts have analyzed the defense in terms of specific elements of a project and applied the concept of laches only to certain portions of a project.⁵⁹ Thus in one case, construction had begun on a project which had not been the subject of a proper environmental impact statement. The court found that the ability to challenge the construction was no longer possible, although it was still appropriate to determine the type of use for the facility.⁶⁰ The segmentation of a project provides one means of avoiding laches where it would otherwise be an effective defense. It suggests the need to analyze a project in stages to determine how to minimize effects at different points.

Another means of avoiding application of the doctrine of laches is to determine the administrative processes involved. Where various agency permits are required, the ability to challenge compliance through the administrative process cannot be barred by laches. Administrative agencies often view failure to obtain a permit as non-compliance and laches will not be a defense to non-compliance with a statutory requirement.⁶¹

A final means for avoiding the doctrine of laches is to petition for agency relief regarding a substantive regulatory function which relates to a project. If an agency recognizes the request for relief based upon its statutory duty, the agency may assert jurisdiction. If it declines relief, the adverse agency decision may provide a basis for challenging a project through litigation of the duty imposed by the agency regulation affecting a project.⁶²

In determining whether the defense of laches may be applicable,

58. See *City of Rochester v. United States Postal Serv.*, 541 F.2d 967, 977 (2d Cir. 1976).

59. See *id.* at 978.

60. *Id.* at 978. Plaintiffs in this case had failed to file suit until two years after notice of construction was given and at the time of appeal construction was 35% complete.

61. Even after a project has been improperly built without permits, agencies may seek restoration and not be barred by the laches defense. For illustrations of cases involving restoration after alleged unauthorized dredge and fill operations, see *United States v. Joseph G. Moretti, Inc.*, 387 F. Supp. 1404, 1407 (S.D. Fla. 1974) (partial restoration), *rev'd in part, vacated in part, remanded* 526 F.2d 1306 (5th Cir. 1976); *United States v. Joseph G. Moretti, Inc.*, 331 F. Supp. 151, 158 (S.D. Fla. 1971), *vacated in part and remanded*, 478 F.2d 418 (5th Cir. 1973).

62. *Environmental Defense Fund, Inc. v. Hardin*, 428 F.2d 1093, 1099 (D.C. Cir. 1970).

it becomes important for both proponents and opponents of a project to analyze alternatives for several reasons. First, the existence in environmental law of multiagency procedures often makes it appropriate to negotiate from strength rather than weakness. Instead of testing the validity of a defense of laches, it is often more practical to determine whether a matter can be settled. Second, the ability to obtain evidence may be affected by the existing time limits.

Mootness—Unless Seeking Relief Can Bar Further Action, a Project May Be Completed Pending Litigation

The nature of environmental litigation involves projects which are usually quite controversial and costly. As a result, it is unlikely that project opponents will be able to obtain temporary injunctive relief in most environmental cases.⁶³ Often during litigation a project will advance to the stage at which courts may determine that an attack on certain action may be moot.⁶⁴ This could be viewed as an alternative to the defense of laches, however, the concept of mootness does not depend upon prior knowledge of a project or undue prejudice to a party. Even if a laches defense cannot be established, there comes a time when relief is merely too late.

It is important for both proponents and opponents to analyze environmental litigation in terms of those procedures which can prevent a project from proceeding. The fact that use of one remedy may require time, but not block a project, and another remedy may require even more time and simultaneously delay a project is important since it may determine whether the opponent will be recognized and given an opportunity to negotiate regarding his objections to a project. Thus, if an environmental impact statement were required by an agency prior to the issuance of a permit, then a slow administrative process is not going to result in the mooting of an opponent's complaint. Any delay in administrative proceedings postpones the project and becomes an advantage for the party ob-

63. In fact, the federal courts have recognized that in such cases the imposition of a high bond "would have the effect of denying . . . non-profit environmental organizations . . . judicial review of defendant's actions" where relief is sought under the National Environmental Policy Act. *Natural Resources Defense Council, Inc. v. Morton*, 337 F. Supp. 167, 168 (D.D.C. 1971), *aff'd*, 458 F.2d 827 (D.C. Cir. 1972); *cf.* *Powelton Civic Home Owners Ass'n v. HUD*, 284 F. Supp. 809, 840 (E.D. Pa. 1968). In *Powelton*, the court did not require any bond in a Housing Act case because it would "raise virtually insuperable financial barriers insulating the agency's decision from effective judicial scrutiny." *Id.* at 841.

64. See *Don't Tear It Down, Inc. v. General Services Administration*, 401 F. Supp. 1194, 1198-99 (D.D.C. 1975).

jecting to the project.

An example of the way in which the mootness defense affects environmental proceedings is found in the previous reference to the Florida Keys' bridges. If an environmental group were interested in challenging this federal highway project requiring numerous bridges, it could object to the individual notices of permit applications which might be sent out by the Department of Transportation.⁶⁵ These numerous bridges are neither licensed or built at the same time and therefore public notices of permit applications have been issued periodically. Those bridges which were the subject of notices to which no objections were filed were constructed without an environmental impact statement. Thus, challenging the construction of any such bridge after the fact, assuming that standing and laches defenses were not raised, would place the objecting party in a position of asking for relief which would be moot. Even if the agencies were found to have violated the law, a court would have to analyze the potential environmental damage caused by the requested relief. Any relief involving elimination of a bridge could require the very type of detrimental underwater construction activities to remove existing structures that the objecting party would have to concede it sought to prevent during the construction process.⁶⁶ In such a case the objecting party's best option would not be to sue the agencies regarding bridges already built or any prior refusal to prepare an environmental impact statement, but rather to object to future permit applications for bridges. It would be preferable to petition the federal agencies to prepare environmental impact statements as to pending bridge permits and to proceed through a slow administrative process rather than seek judicial relief based on the alleged improper construction of bridges after the fact.

65. See generally Joint Public Notice Department of Transportation; Jacksonville District, Corps of Engineers File No. 77L.0462; Seventh Coast Guard District, Coast Guard File No. 16591/3444 (May 4, 1977). The Notice relates to a section of the highway system between Missouri Key and Little Duck Key in Monroe County, Florida and in part states:

Federal Funds are involved in the bridge project, with the Federal Highway Administration acting as lead agency for the environmental document. A Negative Declaration was the environmental document prepared for the bridge project. Comments concerning the effect of the project on the environment should be addressed to the Federal Highway Administration.

66. Courts are reluctant to impose a restoration requirement without evidence that it is feasible and environmentally advisable. See *United States v. Sexton Cove Estates, Inc.*, 526 F.2d 1293, 1301 (5th Cir. 1976).

Utilization of administrative procedures would prevent issuing future permits necessary for the construction of proposed bridges and would be a more practical approach than judicial action subsequent to the issuance of permits and the bridge construction since the administrative agency's permit determination would be a condition precedent to any construction activities. Additionally, the administrative proceeding would offer a forum for establishing evidence. The strategy involved in an administrative proceeding would not require the burden of proof, the bonding requirements and the other time pressures which exist in judicial proceedings. Regardless of how slow the administrative process might be when compared to the potentially immediate relief available in the courts, the agency procedure would still be a condition precedent to the action which the plaintiff seeks to prevent. The foregoing considerations are even more important if the ability of the objecting group to proceed is affected by the financial considerations involved in obtaining evidence and funding administrative or judicial proceedings.

Economic Interests—The Effect of Funding Litigation on Representative Capacity

Even if a party can overcome the standing and the other defenses usually raised in environmental litigation, there remains the need to fund the litigation. Whether environmental litigation is being considered by a public interest group, with little or no funding, by property owners whose interests relate to major economic investments, or by governmental agencies, it is important to consider the protection of financial resources as well as environmental resources when approaching environmental litigation. In addition, it is important to assess the economic strength of the parties involved in environmental litigation to determine the strategies they may utilize in order to present their legal position.

One of the most interesting developments in environmental litigation is the reliance upon the public interest law firm. Many of the more important cases have resulted from conservation groups or public interest law firms funding litigation.⁶⁷ As mentioned pre-

67. Two of the most visible public interest firms in environmental litigation are the Environmental Defense Fund, Inc., 162 Old Town Road, East Setauket, New York 11733, and the Natural Resources Defense Council, Inc. For a complete list of citizens' groups involved in Environmental Protection activities, see NATIONAL FOUNDATION FOR ENVIRONMENTAL CONTROL, INC., DIRECTORY OF ENVIRONMENTAL INFORMATION SOURCES 65-116 (2d ed. 1972). See *Natural Resources Defense Council, Inc. v. Callaway*, 392 F. Supp. 685 (D.D.C. 1975). The NRDC successfully invalidated a restrictive test of navigability used by the Corps of Engineers for its section 404 dredge and fill jurisdiction. *Id.* at 686. As a result of this suit

viously, when resources are important to the general public, it is very unusual for specific individuals to participate in litigation by opposing a specific project which threatens those resources. Apart from the risks of counterclaims⁶⁸ and the specific standing issues which may be raised, there are economic bars to such lawsuits.

The Supreme Court of the United States confirmed that under the common law rule applicable in the federal courts, protection of the environment does not justify an award of attorneys' fees to the prevailing litigant.⁶⁹ There are, however, environmental protection statutes which provide for authorization of attorneys' fees to the prevailing parties,⁷⁰ and state courts have considered establishing their own "common law rules" in order to award attorneys' fees.⁷¹ Nevertheless, these statutes and decisions do not provide the necessary economic basis for initiating an environmental lawsuit and obtaining the often costly expert witnesses.

Unlike other areas of the law, the use of a class action suit does not appear to have much significance in environmental litigation to date.⁷² Due to the need to resolve issues such as the existence of a class, the class action results in delays that may be unacceptable because of the necessity for immediate effective results.⁷³ This could be less of a problem if the nature of environmental litigation shifted from protection of the public interest in natural resources to issues involving damages to property or to individuals caused by actions

and subsequent Corps of Engineers' guidelines, the Corps "now claims jurisdiction over not only waters subject to the ebb and flow of the tide but also coastal and freshwater wetlands and swamps that are contiguous to traditional navigable waters." W. RODGERS, ENVIRONMENTAL LAW 403 (1977). See also 33 C.F.R. § 209.120(d)(1), (2) (1977).

68. See generally Note, *Counterclaim and Countersuit Harrassment of Private Environmental Plaintiffs: The Problem, Its Implications, and Proposed Solutions*, 74 MICH. L. REV. 106 (1975).

69. *Alyeska Pipeline Serv. Co. v. Wilderness Soc'y*, 421 U.S. 240, 270-71 (1975).

70. See, e.g., The Clean Air Act, § 304(d), 42 U.S.C. § 1857h-2(d) (1970), as amended by the Clean Air Act Amendments of 1977, Pub. L. No. 95-95, § 303, 91 Stat. 771 (1977) (to be codified in 42 U.S.C. § 7401). The Toxic Substances Control Act, 15 U.S.C.A. §§ 2618(d), 2619(c)(2), 2620(b)(4)(C) (Supp. 1977); Energy Policy and Conservation Act, § 335(d), 42 U.S.C. § 6305(d) (Supp. V 1975).

71. See *Serrano v. Priest*, 569 P.2d 1303, 1312-16, 141 Cal. Rptr. 315, 324-28 (Cal. 1977) (attorneys' fees awarded under "private attorney general" theory). See generally Comment, *Federal Powers and the Eleventh Amendment: Attorneys' Fees in Private Suits Against the State*, 63 CAL. L. REV. 1167 (1975); see also *Alyeska Pipeline Serv. Co. v. Wilderness Soc'y*, 421 U.S. 240, 269-70 n.44 (1975).

72. For an analysis of the types of suits which warrant a class action and the types of problems which can be raised as a result of a class action, see *Developments in the Law—Class Actions*, 89 HARV. L. REV. 1318, 1321-29 (1976).

73. *Id.* at 1331-48.

affecting the environment.⁷⁴ Such a shift is not yet apparent and is not a part of what is generally known as environmental litigation.⁷⁵

Environmental litigation usually involves the need to establish harm to an environmental system.⁷⁶ Such systems are so complicated that they cannot effectively be described by the lay witness.⁷⁷ Therefore the utilization of experts and the studies which must be obtained to establish their opinion can involve prohibitive costs.⁷⁸ Thus, the economics of environmental litigation must always be evaluated in determining strategies.

In many cases the economic interests influence the selection of a forum.⁷⁹ It is far less costly to proceed before an administrative agency which has regulations providing for standing and informal procedures which do not require extensive and expensive deposi-

74. See generally *id.* at 1322 (referring to the "consumer" class suit and citing *Kalven & Rosenfeld, The Contemporary Function of the Class Suit*, 8 U. CHI. L. REV. 684 (1941) as the "classic" statement of the theory of combining numerous consumer claims).

75. The social impact of litigation filed by an individual to challenge a statutory construction can have a broad effect even though the public is not a party. See Chayes, *The Role of the Judge in Public Law Litigation*, 89 HARV. L. REV. 1281, 1294-96 (1976). Professor Chayes wrote: "And courts, recognizing the undeniable presence of competing interests, many of them unrepresented by the litigants, are increasingly faced with the difficult problem of shaping relief to give due weight to the concerns of the unrepresented." *Id.* at 1296. An illustration of such a broad effect is environmental litigation by a single group against a single federal agency regarding interpretation of a federal regulation which has national effects. See *Natural Resources Defense Council, Inc. v. Callaway*, 392 F. Supp. 685, 686 (D.D.C. 1975).

76. However, environmental litigation has often been used to present courts with the question of whether environmental statutes should be used to evaluate decisions which involve matters other than environmental systems. See *Breckinridge v. Rumsfeld*, 537 F.2d 864, 867 (6th Cir. 1976) (concluding NEPA's reference to "human environment" did not require an environmental impact statement as to job reduction resulting from transfers of personnel from army depots). See also Note, *The Environmental Impact Statement Requirement in Agency Enforcement Adjudication*, 91 HARV. L. REV. 815, 816-17 (1978) (noting that NEPA requirements have been raised as a defense against federal agency enforcement adjudications involving FTC policies).

77. The challenge to the Reserve Mining Company's discharge of talconite and asbestos into Lake Superior required testimony from numerous expert witnesses. *United States v. Reserve Mining Co.*, 380 F. Supp. 11, 15, 39 (D. Minn.), *stayed*, 498 F.2d 1073 (8th Cir. 1974), *modified in part sub nom.*, *Reserve Mining Co. v. EPA*, 514 F.2d 492 (8th Cir. 1975). See generally Hyde, *Expert Evidence in Environmental Cases—The Offense and the Defense*, 2 Environmental Litigation 223, 225 (July 17-22, 1977) (ALI-ABA Course of Study Materials).

78. The expenditure of costs for obtaining environmental information can be so large as to constitute a determination of policy. Thus in *Scientists' Inst. for Public Information, Inc. v. United States Atomic Energy Comm'n*, 481 F.2d 1079 (D.C. Cir. 1973), the obligation to prepare an environmental impact statement for a research and development program involving the Liquid Metal Fast Breeder Reactor was found to involve allocation of today's research money [which] dictates the application of tomorrow's technology. See W. RODGERS, ENVIRONMENTAL LAW 13 (1977).

79. See generally W. RODGERS, ENVIRONMENTAL LAW 13 (1977).

tions and the time commitment otherwise required in judicial proceedings.⁸⁰ It is also possible that agencies may grant relief which then results in the agencies assuming the legal and economic burden of proceeding with a matter.

Environmental litigation is affected in several ways by the ability of parties to present evidence relating to complex environmental systems. The costs of obtaining such evidence, in terms of money spent and time wasted, have a great effect on the strategies utilized in obtaining and presenting environmental evidence.

STRATEGY INVOLVED IN OBTAINING AND PRESENTING EVIDENCE IN ENVIRONMENTAL LITIGATION

A unique feature of environmental litigation is the need to depend upon expertise. While it may be easy to identify and object to undesirable characteristics of a project, it is necessary to translate such objections into competent and substantial evidence.⁸¹ By its nature, environmental law requires the utilization of various sciences and professional data in order to determine effects. Although the discov-

80. The Public Notice, *supra* note 65 involving the Florida Keys' bridge dredge and fill permit applications confirms that costly expert opinions are not always required. The Public Notice at pages 2 and 3 invites non-technical public participation:

The decision whether to issue a permit will be based on an evaluation of the probable impact of the proposed activity on the public interest. That decision will reflect the national concern for both protection and utilization of important resources. The benefit which reasonably may be expected to accrue from the proposal must be balanced against its reasonably foreseeable detriments. All factors which may be relevant to the proposal will be considered; among those are conservation, economics, aesthetics, general environmental concerns, historic sites, public parks, fish and wildlife, flood damage prevention, land use classification, navigation, recreation, water supply, water quality and, in general, the needs and welfare of the people. All comments received will be made part of the record and given full consideration in determining whether or not it would be in the best public interest to grant approval.

Any person who has an interest which may be adversely affected by the issuance of the permits may request a public hearing. The request must be submitted, in writing, within thirty days of the date of this notice and must clearly set forth the interest which may be adversely affected and the manner in which the interest may be adversely affected by the activity.

Interested parties are requested to express their views, in writing, concerning the proposed work giving sufficient detail to establish a clear understanding of reasons for support or opposition.

Thus, the Public Notice provides an inexpensive method of participating in a decisionmaking process as compared to the requirements of a judicial proceeding.

81. The test for evidence in such cases varies depending upon the statutes involved, but generally is referred to as "substantial competent," "substantial" or "competent" evidence. See *Farrugia v. Frederick*, 344 So. 2d 921, 923 (Fla. Dist. Ct. App. 1977) ("substantial competent evidence"); cf. *Harrison v. Indiana Auto Shredders Co.*, 528 F.2d 1107, 1123 (7th Cir. 1975) (extensive, detailed testimony found insufficient).

ery and presentation of that evidence can be quite costly, competent scientific and economic evidence is needed since environmental litigation is often unsuccessful even where the adverse effects of a project are apparent.⁸²

A classic example of this occurred in *Harrison v. Indiana Auto Shredders Co.*⁸³ There, a noisy automobile shredding and recycling plant was challenged as a public nuisance. The Seventh Circuit reversed the trial court which had enjoined the operation as a public nuisance.⁸⁴ Although there were certain obvious undesirable effects from the operation, there had not been any competent evidence to demonstrate that the operation was in fact a public nuisance.⁸⁵ The case is most significant because it appears from the court opinion written by retired Associate Justice Tom Clark that if the opinions of experts had been used to evaluate the project and had confirmed the reaction of the public, the Seventh Circuit might have affirmed the trial court.⁸⁶ The opinion of Justice Clark confirms that public opinion and the obviously annoying characteristics of a project are not competent evidence to show a public nuisance.⁸⁷

Justice Clark found that the presented testimony merely supported characterization of the shredder as "troublesome and annoying."⁸⁸ Justice Clark noted that such such testimony was not "competent to prove that the shredder constituted a threat or hazard to the health and life of the community."⁸⁹ As an example of the lack of competent evidence, Justice Clark noted that Dr. Emmett Lamb, a trained surgeon specializing in industrial medicine and the medical profession's representative to the local Air Pollution Control Board, testified about his observations. Over defendant's objections, he gave his opinion that the shredder might have a deleterious effect on the surrounding neighborhood, even suggesting that the air pollution from the shredder might have carcinogenic properties. Although this testimony was credible as to the observations which Dr. Lamb was able to make, Justice Clark felt that the evidence was insufficient because:

82. *Harrison v. Indiana Auto Shredders Co.*, 528 F.2d 1107, 1115-17, 1123 (7th Cir. 1975).

83. *Id.* at 1107.

84. *Id.* at 1126.

85. *Id.* at 1123.

86. *See id.* at 1122-23, 1125 (Justice Clark was sitting by designation).

87. *Id.* at 1117.

88. *Id.* at 1116.

89. *Id.* at 1116.

Dr. Lamb could give neither qualitative nor quantitative analysis of the emissions and was able to give only tentative opinions about possible health hazards caused by the shredder because he had never analyzed or measured the shredder's emissions. In fact, the claimants were unable to present any evidence of imminent health hazards caused by or attributed to the shredder.⁹⁰

Justice Clark distinguished between competent evidence and "strong proof of the displeasure and annoyance caused by the shredder's noise, vibration and air pollution."⁹¹

Prior to asserting a given legal position, it is most important to obtain competent scientific and economic evidence in support thereof, not only for the purpose of obtaining satisfactory results, but also to insure that parties are not subjected to unnecessary counterclaims. The need for concern about counterclaims is based upon the fact that the environmental regulatory system has advanced to the stage where effective use of an objection can block projects. The ability to participate in a meaningful process therefore carries with it the obligation to proceed responsibly.⁹²

Certain laws seek public input and, in such situations, the broad nature of public concern should immunize an objector even if he or she proceeds without any competent evidence as a basis for objection.⁹³ As an example, the United States Army Corps of Engineers issues Public Notices requesting the public to provide the agency with objections and information as to a broad category of possible effects from a project which the agency may be asked to permit.⁹⁴ It is the Corps of Engineers that ultimately weighs the objections received and reaches a conclusion as to whether valid grounds exist for granting or denying a permit. Nevertheless, such agency objections involve a different standard of evidence than court procedures.⁹⁵ To proceed before a court, a party is expected to present competent evidence in support of a position. Thus, a party which has not retained expert witnesses to evaluate environmental problems prior to participating in a judicial proceeding may be held to a different standard of responsibility if the objections are later found

90. *Id.* at 1116.

91. *Id.* at 1117.

92. See Note, *Counterclaims and Countersuit Harrassment of Private Environmental Plaintiffs: The Problem, Its Implications, and Proposed Solutions*, 74 MICH. L. REV. 106 (1975).

93. See material quoted note 80 *supra*.

94. See material quoted note 80 *supra*.

95. See material quoted note 80 *supra*.

to lack any merit and to have delayed a project. The resolution of any doubts of proper use of the administrative or judicial process should be in favor of the objecting party.⁹⁶ Otherwise the chilling effect of the threat of counterclaims will prevent the environmental laws from working effectively.⁹⁷

The emphasis on the importance of evidence as a means of proving a case and preventing counterclaims requires consideration of how such evidence is obtained. Although the sources of environmental expertise are virtually unlimited,⁹⁸ the ability to utilize the available information is restricted by a party's ability to finance the processes necessary to obtain expert opinions and the amount of time necessary for preparation of such studies.⁹⁹ Because the process of obtaining competent evidence directly affects environmental litigation, it can become that litigation's most significant feature.¹⁰⁰

Sources of Information and Evidence

Utilizing NEPA. The National Environmental Policy Act (NEPA) is one means of obtaining environmental information.¹⁰¹ When federal agencies have issued permits without complying with NEPA—which is an environmental disclosure and evaluation statute¹⁰²—the courts have not only required compliance but have enjoined use of the action which was permitted pending compliance.¹⁰³

The process of litigating to obtain information through an environmental impact statement (EIS) required under section 102(2)(C) of NEPA illustrates a rather sophisticated approach to seeking information.¹⁰⁴ If a federal agency denies the request for an EIS, expert

96. This is due to the public policy which favors the presentation of citizens suits. See *Natural Resources Defense Council, Inc. v. Train*, 510 F.2d 692, 699-700 (D.C. Cir. 1975).

97. See Note, *Counterclaims and Countersuit Harrassment of Private Environmental Plaintiffs: The Problem, Its Implications, and Proposed Solutions*, 74 MICH. L. REV. 106 (1975).

98. See W. RODGERS, *ENVIRONMENTAL LAW* 5-10 (1977). For an excellent listing of the varied environmental information sources see NATIONAL FOUNDATION FOR ENVIRONMENTAL CONTROL, INC., *DIRECTORY OF ENVIRONMENTAL INFORMATION SOURCES* (2d ed. 1972).

99. W. RODGERS, *ENVIRONMENTAL LAW* 5-10 (1977).

100. See *Scientists' Inst. For Public Information, Inc. v. United States Atomic Energy Comm'n*, 481 F.2d 1079, 1091, 1094 (D.C. Cir. 1973) (litigation centered around the AEC's failure to prepare an extensive EIS for a research project still in the developmental stages).

101. 42 U.S.C. § 4332(c) (1970).

102. *Id.* See also F. ANDERSON, *NEPA IN THE COURTS: A LEGAL ANALYSIS OF THE NATIONAL ENVIRONMENTAL POLICY ACT OF 1969* 2, 291 (1973) (available from the Environmental Law Institute).

103. *Id.* at 239.

104. The approach is "sophisticated" in the sense that it requires assertion of statutory

testimony is often required to show that the agency action complained of was incorrect, and that it involved a major federal action which would have a significant effect upon the human environment.¹⁰⁵ This presupposes possession of information by the objecting party in order to establish that the EIS did not contain sufficient information.¹⁰⁶ Thus, there are situations where a suit to require an EIS pursuant to NEPA can be a rather expensive and impractical way of obtaining information.¹⁰⁷

In those situations where such litigation is not possible, however, NEPA can be utilized to develop agency reports.¹⁰⁸ For example, many agencies often prepare an environmental assessment as a substitute for an EIS.¹⁰⁹ An environmental assessment is used to justify an agency's conclusion that an EIS is unnecessary and may often provide the type of information which an EIS would contain.¹¹⁰ This information can often substantiate an opponent's contradictory conclusion about the EIS or the whole project.

Developing an Agency Record. One of the more traditional approaches to obtaining information is to utilize agency hearings to develop a record.¹¹¹ In many cases, scientists and leading experts who would not ordinarily make themselves available for the purposes of judicial litigation will appear and provide a written statement at a hearing.¹¹² Many agency hearings are informal, and there

rights to force an opponent to develop the information you seek. ENVIRONMENTAL LAW INSTITUTE, FEDERAL ENVIRONMENTAL LAW 238, 278 (E. Dolgin & T. Guilbert eds. 1974) (neither NEPA nor its legislative history mentions judicial review).

105. In order to determine whether an EIS should be prepared, courts use as a review test the "arbitrary and capricious" standard. See *Hanly v. Kleindienst*, 471 F.2d 823, 835 (2d Cir. 1972).

106. In order to show that the agency "clearly," "arbitrarily" or "capriciously" erred, it is necessary to present proof to refute an agency decision that an EIS was not necessary. Often an agency will document its decision not to prepare an EIS. See *First Nat'l Bank v. Richardson*, 484 F.2d 1369, 1371 (7th Cir. 1973).

107. This is due to the need to refute the presumption that the agency has not erred. See material cited note 106 *supra*.

108. In *First Nat'l Bank v. Richardson*, 484 F.2d 1369 (7th Cir. 1973), the environmental assessment prepared by an agency to justify not preparing an EIS was a comprehensive 142 page report. *Id.* at 1372.

109. See *id.* at 1372.

110. See *id.* at 1372. See material on "negative declarations" cited at note 21 *supra*.

111. See the Public Notice quoted at note 80 *supra*, which shows the procedure followed for obtaining a hearing in most cases. See also ENVIRONMENTAL LAW INSTITUTE, FEDERAL ENVIRONMENTAL LAW 238, 389-96 (E. Dolgin & T. Guilbert eds. 1974) (review of general procedure for public hearings).

112. The author has observed this in numerous administrative hearings. Experts will not only provide published papers but often consent to preparing a statement, if they feel they can avoid subpoenas, cross-examination and timely depositions which they have experienced

is often no cross-examination.¹¹³ In addition, informal agency hearings offer the opportunity to submit documentary evidence which may become a part of the agency record.¹¹⁴ Often reports can be submitted into evidence through administrative procedures, even though the more formal judicial rules of evidence would not allow them to be made part of a record if it were created during judicial proceedings.¹¹⁵

Utilizing Freedom of Information Statutes. There are situations where litigation for the purpose of obtaining information is not practical and where no time is available to develop a record through participation in administrative proceedings.¹¹⁶ In those situations there are federal¹¹⁷ and state statutes¹¹⁸ providing for access to usable information held by governmental entities.¹¹⁹ Any opportunity to obtain information which may later be the basis for filing requests for admissions to force an opponent to stipulate to scientific evidence should not be overlooked. For example, such information can be obtained from the following sources.

Requests to governmental agencies often result in access to governmental reports which can constitute the basis for litigation and may serve as "competent substantial evidence" if the author can be found or if the validity of the document can be stipulated to in discovery or pretrial proceedings.¹²⁰ Valuable information can be obtained through governmental reports, notices and mailing lists.¹²¹

in judicial proceedings.

113. This is often due to the numbers of public witnesses who appear to oppose an application, and the time restraints which result, rather than the absence of a statutory right to cross-examine witnesses.

114. See Public Notice quoted at note 80 *supra* suggesting that written comments may be accepted.

115. See Public Notice quoted at note 80 *supra*.

116. For example, in certain cases where permits have been issued without an EIS, litigation would be necessary due to the termination of the agency process.

117. See The Freedom of Information Act, 5 U.S.C. §§ 552, 552(b) (1970 & Supp. V 1975).

118. See Florida Sunshine Law, FLA. STAT. ANN. § 286.011 (West 1975); Caplin & Pitt, *Freedom of Information And Sunshine Laws*, N.Y.L.J. Seminar Publication (Law Journal Press 1977); Comment, *Pennsylvania's "Sunshine Law": Problems of Construction and Enforcement*, 124 U. PA. L. REV. 536 (1975).

119. Such information may be obtained concurrent with discovery efforts.

120. Often agencies will distribute information through public relations or information service personnel. This is a non-statutory procedure but it should be recognized that most agencies have information divisions which issue press releases. Even opposing government counsel will often assist, if requested, in obtaining agency information available for public distribution.

121. Most agencies have regular mailing lists and will send normal press releases and reports if requested.

Congressmen and public officials often can request and obtain governmental reports. In many cases it helps to have a sympathetic official request such information, but most elected officials will respond to requests for information whether sympathetic to a position or not. The various governmental and agency sources available for obtaining evidence should be carefully considered¹²² since they provide considerable financial savings in expert reports and also save substantial time which might otherwise restrict a litigant's ability to proceed.

Discovery. In addition to the above mentioned sources, the traditional use of discovery under federal and state rules of procedure¹²³ can provide access to internal agency materials and to private parties' information. To the extent that initial information may justify litigation, it is always possible that certain key issues may require additional evidentiary proof in order to proceed with the presentation of the case. One should always consider whether the other side might agree to stipulate to certain facts, and whether experts will confirm the validity of certain facts or conclusions.¹²⁴

An illustration of this occurred in the preparation of a case involving the determination of whether a drainage district could be established in the Everglades near a proposed jetport.¹²⁵ It was argued by the National Audubon Society that the establishment of the district would interrupt the natural southerly sheet-flow of water from Central Florida's Lake Okeechobee across the Everglades, and ultimately into the Gulf of Mexico.¹²⁶ Although neither the existence of the sheet-flow nor the value of the water as a part of the environmental system was ever in question, an issue of proof did exist regarding the water's flow across the land where the proposed drainage district was to be located. The opponents of the project had access to governmental charts and even space satellite photos which

122. While such information may not always be admissible as competent if offered by an agency, it may be used by an adverse party as evidence of agency admissions or agency practices or policies.

123. See generally 4 MOORE'S FEDERAL PRACTICE ¶ 26.00[1], at 26-31, ¶ 26.02[4], at 26-71 (2d ed. 1948).

124. The nature of the judicial process often precludes the courts from undertaking an independent role and investigating independently. This has in fact been recognized as an important issue. See ENVIRONMENTAL LAW INSTITUTE, FEDERAL ENVIRONMENTAL LAW 192, 193 (E. Dolgin & T. Guilbert eds. 1974).

125. *Groover v. A.B.E. Options, Inc.*, No. 2-350 (Cir. Ct. Monroe County, Fla. Dec. 17, 1970), reprinted in 2 Environmental Litigation 164-69 (July 17-22, 1977) (ALI-ABA Course of Study Materials).

126. See *id.*

showed that certain documentation could establish sheet-flow in a general direction.¹²⁷ It was still necessary, however, to prove that the sheet-flow involved in the area of the proposed drainage district was flowing from north to southeast.

After several years of oversight satellite photographs and other information, it was established that there was no question as to the sheet-flow of the water.¹²⁸ At the time of trial, however, this information did not exist and there was no time for the extensive tests required.¹²⁹ Proof of this fact would have required an expert's interpretation of photos in order to establish the exact nature of the sheet-flow over the proposed district area involved.¹³⁰ Instead, the evidence of sheet-flow direction was established by deposing witnesses of the drainage district proponents who admitted the existence of the flow and its direction during their depositions.¹³¹ This eliminated an important evidentiary problem which could have been established, but only at great cost.

In many environmental cases, both parties face problems of proof because environmental conclusions are often based upon scientific assumptions that are difficult to document. This is certainly the case when an opponent must show that there will be harm due to a project not yet completed and when a proponent must show that the project will have no adverse effect.¹³² Obviously, until a project's completion it will be necessary to base conclusions regarding its potential effects upon scientific expert opinions. The ability to justify a scientific opinion depends upon the ability to convince the court or agency that an expert has sufficient information upon which to reach a conclusion as to the potential environmental impact of a specific project.¹³³ This type of decision is not based upon a scientific determination of a result but is a result of an expert opinion based upon available information which enables the court or agency to reach a decision. The balancing factor which is em-

127. The author participated in the case as counsel for the National Audubon Society and is therefore familiar with the exhibits involved.

128. EVERGLADES JETPORT ADVISORY BOARD, *THE BIG CYPRESS WATERSHED* 12 (April 19, 1971) (report to the Secretary of the Interior).

129. See note 127 *supra*.

130. The necessary proof would have created additional expenses as well as the problem of refuting the other side's attacks on the value and accuracy of the evidence.

131. See note 127 *supra*.

132. See W. RODGERS, *ENVIRONMENTAL LAW* 10-11 (1977) (referring to the look before you leap problem and discussing the need to predict).

133. See generally ENVIRONMENTAL LAW INSTITUTE, *FEDERAL ENVIRONMENTAL LAW* 192-237 (E. Dolgin & T. Guilbert eds. 1974).

ployed to determine the risks of scientific evidence being correct or not depends upon the magnitude of the issues involved.¹³⁴ It should always be recognized, however, that if the parties stipulate to, or admit the existence of, certain scientific facts and conclusions, a court or agency may accept those parties' stipulations or admissions as a basis for decision.¹³⁵

Utilizing the Expert Witness

In the presentation of environmental cases, one of the most difficult determinations is the strategy for presentation of environmental evidence. Cases have been lost by the utilization of environmental experts who are not able to testify regarding a specific field which is involved.¹³⁶ Unlike the various disciplines of science which may be utilized in reaching a conclusion in a laboratory, most environmental litigation involves an overlapping disciplinary approach to problems. In a wetlands case, it may be necessary to have testimony from biologists, chemists, hydrologists and experts in various other fields in order to reach a conclusion as to a project's potential for environmental damage.¹³⁷ It is most unusual to find a single witness who can present an entire case. In many cases even the expert witnesses are not able to help the attorney in evaluating whether certain additional experts should be called in light of the available information on the project.

The first problem that must be addressed is the source for the environmental witnesses. Most large corporations and governmental agencies have their own staffs, but they do not necessarily embrace all the scientific fields which may be involved in the project. Conservation groups usually have access to academic experts and other professionals within their membership who can provide them with information as to the type of expertise they may require.¹³⁸

134. *Id.* at 192-237.

135. *Id.* at 192-237.

136. See *Farrugia v. Frederick*, 344 So. 2d 921, 922 (Fla. Dist. Ct. App. 1977) (suggesting that the courts can use an expert witness to support conclusions other than those for which the witness was called to testify). In the case involved, it appeared that the expert had to admit a problem of water quality would be caused by a project. The court decision indicated there were no experts called to show that the specific problem could not be avoided by engineering techniques or other scientific means.

137. It is not likely that a single expert witness will be able to show competence or expertise in more than a limited area in such a case.

138. This presupposes a group which has established credentials and a responsible role in a community.

It is always important to evaluate the available environmental expertise and meet with all experts at one time to discuss the project. This enables evaluation of the way in which the available expertise may assist in the presentation of a case. At the initial meeting of all such experts it is important to determine the following matters.

One should first determine whether the available experts are sufficiently qualified to present the necessary testimony. This will necessarily involve an assessment of their experience in a particular field, the question of whether they are regarded as impartial and the nature of their previous testimony or publications which might in any way be used to support or oppose their testimony. Second, the potential litigant should determine whether the experts agree on the effects of the project. Certain experts may conclude that a project will cause one type of damage while other experts may disagree. This often is an effective means of determining whether your experts are sufficiently prepared and whether they require the services of additional experts in order to reconcile possible differences or resolve questions they cannot.

When meeting with experts, it is always valuable to require that their explanations be translated into simple terms. Where attorneys feel they cannot admit their ignorance of the experts' terminology because of their relationships with their clients (who may also be present), they should simply stress the need for experts to communicate in simple terms in order to: (1) present a clear presentation to a tribunal which may, in an agency proceeding, be composed of experts or, in a judicial proceeding, may be a judge in a court of general jurisdiction without any previous understanding of the terms involved; and (2) insure that the record created will be clear in the event that there is a need for appellate proceedings.

Clarity and simplicity in initial meetings will not only assist in insuring that the experts can raise and answer all the problems which may exist, but will also help in determining whether they can communicate in an effective manner. The initial meetings should also give the attorney an opportunity to determine the order and the style of presentation in a case. Most scientific systems have an interrelationship and require that one establish how an environmental system functions so that the target project can be evaluated in terms of the way it will fit into the system. Whether a party is opposing or proposing a specific project, it is difficult to communicate the exact effects that a project may have on an environmental system until the system involved is thoroughly understood.

In connection with explaining an environmental system, it is often difficult to present a single witness who can describe the entire system, therefore a thorough description may require presenting the expertise of several scientific disciplines. There are three approaches which can be used in presenting expert testimony in such a situation.

Utilization of the Generalist. This involves selection of an expert with a general background, who is not only articulate but by virtue of ability and education, can explain an environmental system in general terms. In many cases when the expert is challenged, other experts present can be called to provide additional information in any area which might be the subject of question. It is possible for one expert to rely upon the work of another. If the expert whose work is relied upon is presented as a witness, then an attempt by the opposition to challenge the witness called as a generalist may help dignify the expertise of the witness whose scientific work is relied upon. The idea of the generalist is based upon the understanding that there are other witnesses present to substantiate the generalist's testimony. To the extent that there are no such other witnesses present, it is dangerous to attempt to rely upon a single witness's generalized testimony which goes beyond that person's own area of expertise.

Utilization of the Panel Approach. In many administrative hearings, an informal procedure is followed which allows for the presentation of a panel of experts. Whether the panel involves experts seated around a single table, or the presentation of one expert after another, the panel approach is very effective. The party introducing the testimony can state at the outset that a number of witnesses will be presented. This is usually effective in a public hearing where a single party wants to demonstrate its position and indicates that it will present a number of expert witnesses. In such cases, there is a tendency to allow the single presentation to proceed without interruption. Even in those situations where agencies have the right to examine, they may recognize that they have not heard the entire presentation until all the witnesses have testified and choose to delay the examination until that time. This is a very effective means of presenting a single case, not only because it may eliminate or minimize examination and cross-examination but also because it creates a record which is easy to follow. If a public hearing involves hundreds of witnesses it becomes very expensive to select relevant testimony from the record without considering other conflicting testimony. In those cases where a party presents a position and there

are others who favor the same position but who are not equally well prepared or not in entire agreement with the approach, the panel presentation also provides an additional means of effectively distinguishing where the presentation of the case begins and ends. An attorney for a party calling several experts can not only remind the tribunal of the existence of the panel presentation, but may also introduce individual experts or witnesses and then summarize at the end of their testimony.

The Report Approach. This approach involves the preparation of a report or a statement in advance. The report is then distributed to the members of an agency or the trier of fact along with the testimony of the expert. In such cases, great care should be exercised by the party presenting such a report to insure that it does not contain either statements which appear to be argumentative or generalizations which would be objected to by either the opposing party or the individuals responsible for making the ultimate decision. If reports are inordinately broad, a single question on a specific point may cast doubt on the validity of the entire report. The advantage of such a report is that it can often be introduced into evidence and thereby save a great deal of testimony. Such a report may also minimize the examination of the particular party and allow the witness to concentrate on the conclusions without becoming involved with extensive details which might reduce the effectiveness of the presentation. Reports are also of tremendous advantage in terms of their use as part of a record in appellate proceedings. If a report cannot be admitted into evidence, however, the expert should be prepared to proceed based upon those portions of the report which are allowed into evidence. If none of the report can be admitted into evidence, the expert must be prepared to utilize an alternative presentation.

These three presentation techniques are not mutually exclusive, nor are they the only means of presenting environmental testimony. There are situations, especially in judicial proceedings, where a witness will simply not be allowed to present a report. For various reasons, those situations require that the examination process involve the attorney. To the extent that environmental litigation requires such an approach, it is similar to other forms of litigation. It is worthwhile to consider some excellent texts written on the art of examination and cross-examination in order to prepare the expert

witness for such an experience.¹³⁹

One of the more interesting features of environmental litigation is the extensive use of reports and studies presented into evidence. This allows an effective opportunity to cross-examine a witness while concurrently attempting to confuse an opponent's presentation. It is often possible to object to the introduction of demonstrative evidence such as reports unless provided the opportunity to question the witness who is supposedly the author or the collaborator in the report. In many cases, by challenging the expertise of the witness and then analyzing the report carefully, it is possible to undermine the expertise of the witness prior to the presentation of either direct testimony or the report.

As has been mentioned, the very nature of the environmental forum affects the ability to examine or cross-examine witnesses. There are advantages to appearing before an informal agency proceeding and being able to submit several witnesses who are not subject to cross-examination. Nevertheless, these advantages are short-lived if opposing parties utilize the same approach and challenge statements offered by your own expert witnesses. Administrative agencies, especially at the state level, often involve personnel who may not be attorneys and who may view the process of objecting based on evidentiary rules and cross-examination as a waste of time. Although they usually will not articulate those feelings, it is important in environmental litigation to recognize that objection and cross-examination may sometimes have an adverse effect upon the adjudicatory tribunal. This becomes an important matter of strategy in evaluating the frequency and types of evidentiary objections one should assert. Applicants for permits frequently find that if they present witnesses in a complex matter and then object to opposition witnesses, the administrative agency may postpone the hearing until a time when it does not conflict with other items on a specific agenda. Thus, a party may be forced to choose between effective objections and cross-examination for the purpose of protecting an appellate record and the ability to obtain a hearing and decision on a specific date.

The most prudent course of action is to insure that the relevant judicial rules relating to admission of evidence are followed and that improperly submitted evidence is the subject of objection.¹⁴⁰ If, in

139. One useful example of this type of literature is H. BODIN, *CIVIL LITIGATION AND TRIAL TECHNIQUES* (1976) (Practicing Law Institute Publication).

140. This is done by objecting in a manner which politely but firmly establishes a record.

the interest of allowing a hearing to proceed quickly, evidence which is not only incompetent but very damaging is allowed to be introduced without objection, it is always possible that an unfavorable decision may result. In such a case the risk to obtain a quick result may create the inability to obtain a successful appellate review. Although this is a matter which depends on a case-by-case evaluation, it must be recognized that parties involved in environmental proceedings at an agency level are often required to choose between preparation of a proper record and a quick decision. Although such decisions are usually not required in judicial proceedings, even this rule has its exceptions.

CONCLUSION

It is important to understand that the attorney involved in environmental litigation makes many choices which require interpretation of strategies and options. By always analyzing the strategies available to the opposing side, it is possible to determine the most effective method to pursue. While most environmental litigation may not involve the consequences which befell the warrior who consulted the Oracle at Delphi, it remains important to carefully evaluate the strategies available in environmental litigation because they are often determinative of the result in individual cases and ultimately affect the course of development which our nation will pursue.

While general or standing objections are useful, they may not adequately cover all the legitimate grounds. Therefore an attorney must make a continuing evaluation of the need to object to protect a record; notwithstanding the displeasure which such objections may cause in forums where non-legal triers of fact are receiving the objections.

SHIFTING THE BURDEN OF PROOF IN STATE ENVIRONMENTAL PROTECTION ACTS: A BLESSING TO ENVIRONMENTAL PLAINTIFFS†

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A growing concern for environmental quality has prompted many state legislatures to enact environmental protection acts which complement broad federal guidelines.¹ Six states — Connecticut, Indiana, Illinois, Michigan, Minnesota, and South Dakota — have incorporated into their environmental protection statutes sections allocating the burden of proof between parties in litigation arising out of the act. The burden of proof sections state that once the plaintiff in an environmental suit has established a *prima facie* case that the defendant's actions harm or are likely to harm the environment, the burden of producing evidence shifts to the defendant to rebut this *prima facie* showing or to provide an affirmative defense.

Those persons and organizations desiring to share in the state's goal of preserving a liveable environment will always be the plaintiffs in litigation because

[the] polluter's conduct can stop people from breathing clean air, but the breather's conduct cannot stop the polluter from going about his dirty business. To obtain relief, the breather *must* go to court, and it is one of the plain facts of the judicial system that plaintiffs carry the burden of proof on most of the important issues in a lawsuit, not to mention the financial burden of initiating litigation.²

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1. Among these federal environmental protection acts are the National Environmental Policy Act of 1969, 42 U.S.C. §§ 4321-4361 (1970 & Supp. V 1975) and the Federal Water Pollution Control Act, 33 U.S.C. § 1161, as amended by the Clean Water Act of 1977, Pub. L. No. 95-217, 9 Stat. 1566 (to be codified at 33 U.S.C. §§ 1251-1376).

2. Krier, *The Pollution Problem and Legal Institutions: A Conceptual Overview*, 18 U.C.L.A. L. REV. 429, 455-456 (1971).

However, the substantive rules in favor of preserving the environment may be ineffective due to procedural rules which make pursuit of an environmental issue through judicial channels virtually impossible. Statutory allocation of the burden of proof is a procedural mechanism designed to provide plaintiffs with environmental complaints greater ease of access to the judicial system.

Interpretations of these statutes have defined a *prima facie* showing as much less stringent than the *prima facie* case required under common law theories used in environmental suits. To date litigation in these states where the shifting of the burden of proof is an issue has been infrequent. However, the results of such litigation in Michigan, Minnesota and Illinois demonstrate the usefulness of this kind of statute in efforts to protect a state's environment.

THE STATUTES

The Michigan Environmental Protection Act of 1970³ (MEPA) confers on private individuals and other parties standing to sue in the circuit courts for equitable relief "for the protection of air, water and other natural resources and the public trust therein from pollution, impairment or destruction."⁴ MEPA includes a statute which shifts the burden of proof to the defendant once a plaintiff has established a *prima facie* case.⁵ This statute provides that

When the plaintiff in an action has made a *prima facie* showing that the conduct of the defendant has, or is likely to pollute, impair or destroy the air, water or other natural resources or the public trust therein, the defendant may rebut the *prima facie* showing by the submission of evidence to the contrary. The defendant may also show, by way of an affirmative defense, that there is no feasible and prudent alternative to defendant's conduct and that such conduct is consistent with the promotion of the public health, safety and welfare in light of the state's paramount concern for the protection of its natural resources from pollution, impairment or destruction. Except as to the affirmative defense, the principles of burden of proof and weight of the evidence generally applicable in civil actions in the circuit courts shall apply to actions brought under this act.

Connecticut, Indiana, Minnesota and South Dakota have modeled their statutes after MEPA's and contain similar language.⁶ Illinois,

3. MICH. STAT. ANN. §§ 14.528(201)-(207) (1976).

4. MICH. STAT. ANN. § 14.528(202)(1) (1976).

5. MICH. STAT. ANN. § 14.528(203)(1) (1976).

6. CONN. GEN. STAT. § 22a-17 (1975) reads:

Defense

(a) When the plaintiff in any such action has made a *prima facie* showing that the conduct of the defendant (*acting alone, or in combination with others*) has or is likely unreasonably to pollute, impair or destroy the public trust in the air, water, or other natural resources of the state, the defendant may rebut the *prima facie* showing by the submission of evidence to the contrary. The defendant may also prove, by way of an affirmative defense, that, considering all relevant surrounding circumstances and factors, there is no feasible and prudent alternative to the defendant's conduct and that such conduct is consistent with the reasonable requirements of the public health, safety and welfare. Except as to the aforesaid affirmative defense, nothing in this section shall be construed to affect the principles of burden of proof and weight of the evidence generally applicable in civil actions (emphasis added).

Except for the italicized portion, it is virtually identical to the Michigan provision. IND. CODE § 13-6-1-2 (1977) reads:

Burden of Proof

(a) In any action maintained under § 1 of this Chapter, whenever the petitioner shall have made a *prima facie* showing that the conduct of the respondent has, or is reasonably likely to impair, pollute, or destroy the environment of the state, (b) The respondent shall have the burden of establishing (1) where there is an applicable rule adopted by an agency of the state setting standards for pollution, impairment, or destruction, or for anti-pollution devices, compliance with such rule which shall constitute a *prima facie* defense to petitioner's claim; or where there is no applicable rule, that there is no feasible and prudent alternative and that the conduct, program, or product at issue is consistent with and reasonably required for the promotion of the public health, safety and welfare in light of the state's paramount concern for the protection of its environment from pollution, impairment or destruction. (c) Upon making such proof, said respondent shall have rebutted the *prima facie* showing, and the petitioner shall have the burden of going forward with the evidence.

MINN. STAT. § 116B.04 (1977) reads:

Burden of proof

In any action maintained under section 116B.03, where the subject of the action is conduct governed by any environmental quality standard, limitation, regulation, rule, order, license, stipulation agreement, or permit promulgated or issued by the pollution control agency, department of natural resources, department of health, or department of agriculture, whenever the plaintiff shall have made a *prima facie* showing that the conduct of the defendant violates or is likely to violate said environmental quality standard, limitation, regulation, rule, order, license, stipulation agreement, or permit, the defendant may rebut the *prima facie* showing by the submission of evidence to the contrary; provided, however, that where the environmental quality standards, limitation regulations, rules, orders, licenses, stipulation agreements, or permits of two or more of the aforementioned agencies are inconsistent, the most stringent shall control.

In any other action maintained under section 116B.03, whenever the plaintiff shall have made a *prima facie* showing that the conduct of the defendant has, or is likely to cause the pollution, impairment, or destruction of the air, water, land, or other natural resources located, within the state,

which also has a statute allocating the burden of proof,⁷ has established elaborate administrative procedures to enforce its environmental protection act. These procedures are so different from the environmental protection acts of the other five states that comparisons are difficult, and, therefore, the Illinois act will be discussed separately.

The statutes in Michigan, Minnesota, Connecticut, Indiana and South Dakota all provide that once the plaintiff has established a *prima facie* showing that the defendant has or is likely to harm the environment, the defendant may rebut the plaintiff's case by presenting contrary evidence or by an affirmative defense. The "is likely" language would seem to ease a plaintiff's burden of producing evidence since it indicates that a plaintiff need not prove the harm to an absolute certainty, but only that the harm may reasonably be expected to occur. The affirmative defense outlined in the statutes consists of proof that "there is no feasible and prudent alternative to defendant's conduct and that such conduct is consistent with the promotion of the public health, safety and welfare in the light of the state's paramount concern for the protection of its natural resources"⁸

the defendant may rebut the *prima facie* showing by the submission of evidence to the contrary. The defendant may also show, by way of an affirmative defense, that there is no feasible and prudent alternative and the conduct at issue is consistent with and reasonably required for promotion of the public health, safety, and welfare in light of the state's paramount concern for the protection of its air, water, land and other natural resources from pollution, impairment, or destruction. Economic considerations alone shall not constitute a defense hereunder.

S.D. CODIFIED LAWS Ch. 34A-10-9 (1977) reads:

When the plaintiff in the action has made a *prima facie* showing that the conduct of the defendant is polluting, impairing or destroying the air, water or other natural resources or the public trust therein, the defendant may rebut the *prima facie* showing by the submission of evidence to the contrary.

Ch. 34A-10-10 reads:

The defendant may also show, by way of an affirmative defense, that there is no feasible and prudent alternative to defendant's conduct and that such conduct is consistent with the promotion of the public health, safety, and welfare in light of the state's paramount concern for the protection of its natural resources from pollution, impairment or destruction. Except as to the affirmative defense, the principles of burden of proof and weight of the evidence generally applicable in civil actions in the circuit courts shall apply to actions brought under this chapter.

7. ILL. REV. STAT. Ch. 111-½, § 1031(c) (Supp. 1973).

8. MICH. STAT. ANN. § 14.528(203) (1976). Statutes of the other states contain identical or virtually identical language.

Under both the Indiana and Minnesota acts, a plaintiff may establish a *prima facie* case by showing the defendant's violation of an environmental rule or regulation. The Michigan statute, after which these acts were modeled, makes no mention of this method of establishing a *prima facie* case. The Minnesota act explicitly states that economic factors by themselves will not rebut a *prima facie* case nor serve as an affirmative defense. This exclusion of a purely economic defense should force the parties and the courts to focus on environmental, as well as economic, considerations. The defendant will not be able to simply claim excessive cost of pollution control to establish an effective defense.

THE CASES

Discussion of the effect of these statutes involves a great deal of speculation because very little judicial interpretation of them has occurred to date. Connecticut, Indiana and South Dakota have no cases construing these particular provisions. Michigan and Minnesota have only four cases between them.

The Michigan Supreme Court has spoken definitively concerning MEPA's burden of proof section and has reinforced that section's plain meaning in *Ray v. Mason County Drain Commissioner*.⁹ Plaintiffs, residents of a watershed, brought an action to enjoin the county drain commissioner from proceeding with a channelization program for the watershed and from assessing them for any part of the cost of the project. The channelization would control flooding which occurred in the springtime, causing damage to crops but posing no health or safety hazards. At the time of the suit, only a small number of parcels were actually farmed. The area was a swamp which served as a refuge for a wide variety of wildlife. The trial court found for defendants and the court of appeals affirmed. The state supreme court vacated the decision and remanded the case to the trial court for further findings of fact.¹⁰

Plaintiffs alleged that the proposed project would destroy and pollute the natural resources of the area. In its findings, the trial court stated that plaintiffs failed to sustain their burden of proof.¹¹

9. 393 Mich. 294, 224 N.W.2d 883 (1975).

10. *Id.* at 295, 224 N.W.2d at 884.

11. The trial judge's findings of fact consisted of the following:

Count I is based upon MCLA 691.1202 (Environmental Protection Act), claiming the proposed project will pollute and destroy the natural resources

Since the court made only this conclusory statement and did not set out its findings of fact, the state supreme court remanded the case.¹² Although this determination was all that was necessary for its decision, the supreme court also commented upon MEPA's allocation of the burden of proof. Since the MEPA section contains the language "has, or is likely to pollute," plaintiff's *prima facie* showing is not restricted to actual environmental damage, the court said, but also encompasses probable damage to the environment as well. The court noted that "[o]bviously the evidence necessary to constitute a *prima facie* case will vary with the nature of the alleged environmental degradation involved."¹³

The court also stated that with respect to the plaintiff's burden of establishing a *prima facie* case, the general rules of evidence govern.¹⁴ The plaintiff must prove that the defendant caused environmental harm and then the burden of production shifts to the defendant to rebut. The court remarked that the evidence necessary to establish a *prima facie* case will fluctuate depending upon the type of harm charged:

The nature of the evidence necessary to rebut plaintiff's showing will vary with the type of environmental pollution, impairment or destruction alleged and with the nature and amount of the evidence proffered by the plaintiff. In some cases, no doubt, testimony by expert witnesses may be sufficient to rebut plaintiff's *prima facie* showing. While in other actions the defendant may find it necessary to bring forward field studies, actual tests, and analyses which support his contention that the environment has not or will not be polluted, impaired or destroyed by his conduct. Such proofs become necessary when the impact upon the environment resulting from

in the area as well as increase the pollution of the Pere Marquette River and Lake Michigan, downstream from the proposed project. The plaintiffs do not sustain the burden of proof on this issue. In fact, the burden is carried by a great volume of evidence in favor of the defendants and, therefore, Count I is denied.

Id. at 301, 224 N.W.2d at 885-86.

12. *Id.* at 313, 224 N.W.2d at 891.

13. The court said that "[s]uch a showing is not restricted to actual environmental degradation but also encompasses probable damage to the environment as well. . . . Obviously the evidence necessary to constitute a *prima facie* showing will vary with the nature of the alleged environmental degradation involved." *Id.* at 309, 224 N.W.2d at 889.

14. *Id.* at 309, 224 N.W. 2d at 889. The last sentence of MICH. STAT. ANN. § 14.528(203)(1) reads: "Except as to the affirmative defense, the principles of burden of proof and weight of the evidence generally applicable in civil actions in the circuit courts shall apply to actions brought under this act."

defendant's conduct cannot be ascertained with any degree of reasonable certainty absent empirical studies or tests.¹⁵

The plaintiff retains the burden of persuasion respecting the cause of action throughout the trial. It is the burden of production of evidence which shifts to the defendant, and if the defendant successfully rebuts, this burden of production shifts back to the plaintiff. The court's statement regarding application of the general rules of evidence to suits brought under MEPA seems to add nothing to the act since this is the normal standard in such suits.

As an alternative to submitting evidence in rebuttal to plaintiff's *prima facie* case, MEPA allows a defendant to show that there are no reasonable and prudent alternatives to his action. The defendant in *Ray* made no such election, so the supreme court decided not to consider the matter.¹⁶

A federal court and the Minnesota Supreme Court have decided cases involving the Minnesota burden of proof statute, § 116B.04. The federal court dealt with the subject in *United States v. Reserve Mining Co.*¹⁷ *Reserve Mining* involved a suit by the United States through the Environmental Protection Agency, and by the States of Minnesota, Wisconsin and Michigan, the cities of Duluth and Superior, and organizations with members in Minnesota and adjoining states to enjoin Reserve Mining Company's release of asbestos particles into the air and into the water of Lake Superior.¹⁸ In deciding whether to grant the state of Minnesota injunctive relief, the trial court cited § 116B.04.¹⁹ The plaintiffs established to the trial court's satisfaction that the defendant's air and water emissions were harming the environment and the health of the people of the area, thus completing plaintiffs' *prima facie*

15. *Id.* at 310-311, 224 N.W.2d at 890.

16. *Id.* at 312-313, 224 N.W.2d at 891.

17. 380 F. Supp. 11 (D. Minn. 1974), *injunction stayed and remanded*, 498 F.2d 1073 (8th Cir. 1974), *motion to vacate stay denied*, 419 U.S. 802 (1974), *modified in part and remanded*, 514 F.2d 492 (8th Cir. 1975), *on remand fines established*, 412 F. Supp. 705, *injunction issued*, 417 F. Supp. 789 (D. Minn. 1976), *aff'd and remanded*, 543 F.2d 1210 (8th Cir. 1976).

18. 380 F. Supp. at 21. Reserve Mining Co. is a Minnesota corporation which produces iron ore from taconite, a rock containing an iron oxide. As a side effect of its operation, at the time this suit was filed, Reserve dumped about 67,000 tons of taconite waste (tailings) into Lake Superior every day; these tailings contained substantial quantities of asbestos fibers. *Id.* at 33-34, 36. The tailings were dumped at the lake edge via troughs. *Id.* at 30. The production process also released quantities of asbestos particle laden dust into the air surrounding the plant. *Id.* at 50.

19. *Id.* at 56-57.

case.²⁰ At this point the burden shifted to the defendant. Reserve asserted that permits granted to it by federal and state agencies excused it from compliance with federal and state regulations it had allegedly violated.²¹ Defendant also raised the affirmative defense that there existed no feasible and prudent alternative to its current methods of waste disposal, arguing that the only available alternative²² was less desirable than current practices. In rebuttal, plaintiffs proved that not only did the defendant know of other more viable alternatives, but also that defendant had long before rejected as untenable the 'alternative' it had presented to the court.²³ Had the defendant acted in good faith towards the plaintiffs and the courts and admitted that viable alternatives existed, the rebuttal could have been accomplished with much less effort.²⁴

The Minnesota state courts discussed the shifting of the burden of proof in *County of Freeborn v. Bryson*.²⁵ The case involved a suit by the county to condemn a portion of Bryson's farm land for a county road.²⁶ The Brysons had reserved 19 acres of their 120 acre farm as a natural wildlife marsh and the land the county sought passed through 600 feet of the marsh land.²⁷ Bryson sued the county under the Minnesota Environmental Rights Act²⁸ to enjoin destruction of the natural setting.²⁹ The trial court ruled that the Brysons failed to establish a *prima facie* case and dismissed their action.³⁰

The Minnesota Supreme Court reversed, holding that the Brysons had established a *prima facie* case.³¹ The court said that under § 116B.04, a *prima facie* case consisted of proof (1) that there was

20. Plaintiffs sought to show that although the effects of ingesting asbestos into the human body do not normally manifest themselves for 20 years, the eventual results of the ingestion are a significantly increased likelihood of cancer. Plaintiffs also produced evidence relating inhalation of asbestos to lung diseases and ingestion to development of tumors. *Id.* at 39-41.

21. 380 F. Supp. at 57. The trial court rejected this argument.

22. Deepline depositing of tailings to the bottom of Lake Superior. *Id.* at 65.

23. 380 F. Supp. at 85. The court, in light of defendant's actions, granted plaintiffs an injunction.

24. 412 F. Supp. at 713.

25. 297 Minn. 218, 210 N.W.2d 290 (1973).

26. *Id.* at 219, 210 N.W.2d at 292.

27. *Id.* at 220-21, 210 N.W.2d at 293.

28. MINN. STAT. §§ 116B-116B.13 (1977).

29. 297 Minn. at 219-20, 210 N.W.2d at 293.

30. *Id.* at 220, 210 N.W.2d at 293.

31. *Id.* at 228, 210 N.W.2d at 297.

a protectable natural resource involved and (2) of pollution, impairment, or destruction of that resource by any conduct which has or is likely to have a materially adverse affect on the environment.³² Brysons had established this. They had shown that marsh area was a natural resource within the statute and had proven impairment/destruction of it by the facts that the entire marsh was one ecological unit, that the proposed highway would split the marsh, eliminating some natural elements of the area, that the highway would interfere with the quietness of the marsh, and that the traffic would increase animal fatalities.³³ Because Brysons had thus established a *prima facie* case, the court remanded the case to the trial court to give the county an opportunity to rebut.³⁴

On remand,³⁵ prior to presenting its defense to Brysons' suit, the county acquired a right of way through the adjoining neighbor's land.³⁶ (Peterson's property). This land was also natural marsh land and the proposed highway through this new right of way would impair the marsh in the same manner as the original route.³⁷ At trial, Bryson presented an alternative route for the highway which would avoid the marsh land, but which would require Peterson to shorten several crop rows. This alternate route would not increase cost, but would affect farm efficiency.³⁸ The trial court considered both routes and determined that the route through the marsh land was a more desirable alternative.³⁹

Again the Minnesota Supreme Court reversed.⁴⁰ The county had failed to rebut Brysons' *prima facie* case, either by raising the possibility that the marsh might be drained by a private property

32. *Id.*

33. *Id.*

34. *Id.* at 230, 210 N.W.2d at 298.

35. *County of Freeborn by Tuveson v. Bryson*, ____ Minn. ____, 243 N.W.2d 316 (1976).

36. This land was in addition to a 50-foot right of way across Peterson's property that the county already had obtained for the road.

37. Before this trial, the Brysons granted the state of Minnesota a perpetual wildlife easement over the 19 acres of marsh on their land to avoid the defense by the county that since the marsh land was private property, there was no guarantee that the marsh land would continue to be a natural wildlife area.

38. 243 N.W.2d at 319.

39. *Id.* The trial court apparently felt Peterson might not preserve the marshland and interpreted 116B.04 as giving it discretion to weigh the various alternatives.

40. *Id.* at 322.

owner, which was irrelevant,⁴¹ the court said, or by the suggestion of no feasible and prudent alternative.⁴² The court noted that the no feasible and prudent alternative language apparently came from the federal Department of Transportation Act of 1966⁴³ and, accordingly, followed a U.S. Supreme Court case, *Citizens to Preserve Overton Park, Inc. v. Volpe*⁴⁴ which interpreted that statute. The language meant that "in the absence of unusual or extraordinary factors, the trial court must enjoin environmentally destructive conduct if a feasible and prudent alternative is shown."⁴⁵ Such an alternative, the route through Peterson's farm land, was present here and must be used.⁴⁶

Reliance on the *Overton Park* case would seem to preclude future courts from balancing the environmental harm against the desirability of the alternative. The mandatory language 'must enjoin' indicates that, unless the defendant can demonstrate extenuating circumstances, once a workable alternative is presented, the alternative must be implemented. This result leaves a court little or no leeway to decide that the environmentally harmful means may be better.

The Minnesota Supreme Court once again applied § 116B.04 and shifted the burden of proof in *Minnesota Public Interest Research Group v. White Bear Rod and Gun Club*.⁴⁷

Rice Lake is a shallow, 115 to 130 acre Minnesota lake near St. Paul-Minneapolis, still largely in its natural state.⁴⁸ The Gun Club (defendant) bought property at the south end of the lake and planned to build a trap and skeet shooting facility on the site.⁴⁹ The defendant obtained a special permit, with twenty-six conditions attached, from the local city council, despite heavy protest by local

41. "It follows here that the possibility that Peterson might attempt to drain its marshland for farming purposes is not relevant where the county proposes highway construction which would adversely affect the marsh in a different manner." *Id.* at 320.

42. *Id.*

43. "The purpose and language of the Federal statute and our act are substantially the same. Therefore we follow the decision of the United States Supreme Court and give our statute a similar construction." *Id.* at 321.

44. 401 U.S. 402 (1971).

45. 243 N.W.2d at 321.

46. *Id.*

47. ____ Minn. ____, 257 N.W.2d 762 (1977).

48. *Id.* at 764.

49. *Id.*

citizens.⁵⁰ At least two of the permit conditions were not met.⁵¹ Plaintiffs, two Minnesota citizens' groups, brought this action for declaratory and injunctive relief.⁵² At the time the suit was instituted, defendant had not yet begun construction.⁵³ The defendant completed construction of the facility before trial, even though the trial court stated that they "must bear the risk of being limited or totally enjoined. . . ."⁵⁴

The trial court, applying the two step test outlined in *Bryson*, found that the plaintiffs had established a *prima facie* case.⁵⁵ In order to do this, plaintiffs demonstrated that the Rice Lake area was a protectable natural resource⁵⁶ and that defendant had or would likely damage or pollute the area by noise pollution and by heavy deposits of lead shot in the wetland area.⁵⁷ Applying § 116B.04, the trial court shifted the burden to the defendant to rebut the plaintiffs' evidence.⁵⁸ The defendant's evidence consisted of testimony by the Gun Club president detailing the establishment of the Club at Rice Lake and declaring that the noise by the defendant was minimal, testimony that the Rice Creek Watershed District had no objection to the Gun Club, that a former owner of the property had never seen a natural spring or ducks nesting on the property, that some nearby residential units had not decreased in value, and further testimony about the issuance of the special permit and its conditions.⁵⁹ No affirmative defense was presented.⁶⁰

The trial court ruled that the defendant had failed to rebut the plaintiffs' *prima facie* case.⁶¹ The court dismissed defendant's

50. *Id.* at 765.

51. *Id.* Defendants failed to plant trees within the required date and failed to comply with decibel level limits.

52. *Id.* at 764.

53. *Id.* at 766.

54. *Id.* at 767.

55. *Id.* at 780.

56. *Id.* at 769.

57. *Id.* at 770. Plaintiffs showed that the average normal decibel level of the area was 30-35 and that the decibel level of defendant's operations was from 65-70. (8 to 16 times the average normal level). Plaintiffs also demonstrated that the lead deposits could range from 11 to 44 tons a year and would likely lead to deaths of waterfowl (by ingestion of the shot). *Id.* at 780.

58. *Id.* at 781.

59. *Id.* Defendant also raised the issue of noise caused by other gun-related organizations located in the Rice Lake Area. The trial court ruled this other noise was insignificant. *Id.* at 776.

60. *Id.* at 781.

61. *Id.*

claim of economic hardship, stating that under § 116B.04 economic considerations alone were not a sufficient defense and that the defendant had been warned it would bear the risk of injunction.⁶² After balancing the benefits of the Club to its users against the likely environmental damage, the court enjoined the defendant's conduct.⁶³ Defendant appealed.

The Minnesota Supreme Court affirmed with three judges dissenting.⁶⁴ The court stated that it would only overturn the decision if the trial court's findings of facts were clearly erroneous.⁶⁵ The court held that "the evidence in this case fully supports the trial court's findings and conclusions and that those findings are not clearly erroneous."⁶⁶

The Minnesota Supreme Court's interpretation of § 116B.04 has aided the environmental plaintiff. What constitutes a *prima facie* case is clearly outlined by a two step test. Once the *prima facie* case is established, the burden then shifts to the defendant to produce evidence disproving plaintiff's case or establishing the affirmative defense. To establish the affirmative defense, the defendant must show *no* alternative and bears the risk of nonpersuasion. Once the defendant disproves plaintiff's case or establishes the affirmative defense, the burden will, of course, shift back to plaintiff to rebut the defendant's showing. Thus a plaintiff faced with an affirmative defense must still spend time and money researching and preparing a case to show that a feasible and prudent alternative does or might exist. The plaintiff is still aided, however, because it is the defendant who will lose the affirmative defense by failure to persuade the trier of fact.⁶⁷ Furthermore, *Bryson* mandates acceptance of any feasible and prudent alternative and *White Bear* recognizes that under § 116B.04 economic hardship alone will not be sufficient to rebut the plaintiff's *prima facie* case under burden-shifting statutes.

62. *Id.*

63. *Id.* at 782.

64. *Id.* at 762. The dissenters essentially argued that the plaintiffs had failed to establish a *prima facie* case (they thought plaintiff should have to establish objective level of sound reasonable for Lake Rice Area) and that the remedy was too harsh.

65. *Id.* at 782.

66. *Id.* at 783.

67. On rebuttal, plaintiff need only raise realistic doubts to defendant's contentions. If plaintiff had the burden of persuasion on this issue, plaintiff would have to *prove* its contentions.

THE ILLINOIS VARIATION

Illinois, the sixth state to include a provision shifting the burden of proof, has also been successful in aiding a plaintiff seeking redress for environmental harm.

The Illinois Environmental Protection Act⁶³ was enacted in 1970 "to establish a unified, state-wide program supplemented by private remedies, to restore, protect and enhance the quality of the environment, and to assure that adverse effects upon the environment are fully considered and borne by those who cause them."⁶⁹ In order to facilitate this goal, the act created an Environmental Protection Agency to investigate violations and enforce the act,⁷⁰ a Pollution Control Board to conduct hearings upon the complaints,⁷¹ and included a section detailing the burden of proof.⁷² This section reads:⁷³

In hearings before the Board under this Title the burden shall be on the Agency or other complainant to show either that the respondent has caused or threatened to cause air or water pollution or that the respondent has violated or threatens to violate any provision of this Act or any rule or regulation of the Board or permit or term or condition thereof. If such proof has been made, the burden shall be on the respondent to show that compliance with the Board's regulations would impose an arbitrary or unreasonable hardship.

Once a complainant (usually the Agency, although any person may file a complaint)⁷⁴ shows that respondent has caused pollution or violated any provision of the act, the burden shifts to respondent to show that compliance with the Board's regulations would impose arbitrary or unreasonable hardship. There is no mention of a *prima facie* showing on complainant's part in the section, but in light of the case law below, it seems clear that Illinois intended a complainant to have a minimal burden when proving environmental harm.

The administrative procedures detailed in the act are essentially the same as a determination in a court trial.⁷⁵ The Agency

68. ILL. REV. STAT. Ch. 111-½, §§ 1001-1051 (Supp. 1973).

69. ILL. REV. STAT. Ch. 111-½, § 1002(b) (Supp. 1973).

70. ILL. REV. STAT. Ch. 111-½, § 1004 (Supp. 1973).

71. ILL. REV. STAT. Ch. 111-½, § 1005 (Supp. 1973).

72. ILL. REV. STAT. Ch. 111-½, § 1031(c) (Supp. 1973).

73. *Id.*

74. ILL. REV. STAT. Ch. 111-½, § 1031(b) (Supp. 1973).

75. For a more thorough discussion of Illinois' procedures, see Currie, *Rulemaking Under the Illinois Pollution Law*, 42 U. CHI. L. REV. 457 (1975).

files a complaint and the respondent must answer within a specified time period.⁷⁶ A qualified hearing officer conducts the hearings, which are open to the public and stenographically recorded, and both sides may submit written statements and oral testimony.⁷⁷ After the hearing, the Board issues a final order, which can include a cease and desist order and civil penalties including fines, and publishes a written opinion stating the facts and reasons leading to its decision.⁷⁸ The person adversely affected by the order can petition for judicial review.⁷⁹ This review process by-passes the circuit court and goes directly to the appellate court for the district in which the cause of action arose.⁸⁰ The Board's findings of fact are accepted by the appellate court unless they are contrary to the manifest weight of the evidence.⁸¹ The Illinois Supreme Court may accept an appeal of the appellate court's decision, but it is not a matter of right.⁸²

Illinois' procedures are unique and offer a great deal of help to those desiring to halt pollution and environmental destruction. By using state funds to establish and maintain an agency, Illinois has insured that an environmental plaintiff's lack of funds will not result in the inability to sue. In fact, the Agency is directed to sue any time a violation is discovered.⁸³

The Board members must be technically qualified, and, as a result, should have more expertise in handling environmental cases.⁸⁴ A Board member does not have to be present at every

76. ILL. REV. STAT. Ch. 111-½, § 1031(a) (Supp. 1973).

77. ILL. REV. STAT. Ch. 111-½, § 1032 (Supp. 1973). "Hearing officers shall be attorneys licensed to practice law in Illinois," ILL. REV. STAT. Ch. 111-½, § 1005 (Supp. 1973).

78. ILL. REV. STAT. Ch. 111-½, § 1033 (Supp. 1973).

79. ILL. REV. STAT. Ch. 111-½, § 1029 (Supp. 1973).

80. ILL. REV. STAT. Ch. 111-½, § 1041 (Supp. 1973).

81. *Marblehead Lime Co. v. Pollution Control Bd.*, 42 Ill. App. 3d 116, 122, 355 N.E.2d 607, 611 (1976).

82. ILL. REV. STAT. Ch. 110, §§ 264-279 (Supp. 1973). This is the Administrative Review Act. ILL. REV. STAT. Ch. 110A, § 315 also declares that a party must petition for leave to appeal from the appellate court to the supreme court when the case is not appealable as a matter of right. ILL. REV. STAT. Ch. 110A, § 317 states that only federal or state constitutional questions that have arisen for the first time are appealable as a matter of right.

83. ILL. REV. STAT. Ch. 111-½, § 1031(a) states, in part: "If such investigation discloses that a violation may exist, the Agency *shall* issue and serve upon the person complained against a written notice, together with a formal complaint . . ." specifying the violation (emphasis added).

84. ILL. REV. STAT. Ch. 111-½, § 1005 states that the independent board will

hearing,⁸⁵ but it is the Board which renders the final decision.⁸⁶ The hearing officer, therefore, receives the evidence and participates in the decisionmaking process only to the extent of insuring procedural safeguards.

The Illinois Supreme Court has interpreted the burden of proof section recently in *Processing & Books v. Pollution Control Board*⁸⁷ due to a conflict between its appellate courts. The Agency charged that defendants Processing & Books had caused air pollution consisting of odors from chicken manure and incinerators used to dispose of dead chickens in violation of the act. The definition of air pollution stated in the act has been construed as creating two types of this pollution: 1) air pollution that is injurious to human, plant, or animal life, and to health or to property; and 2) air pollution that unreasonably interferes with the enjoyment of life or property.⁸⁸ With respect to the first type of air pollution, all that is required of the plaintiff to meet its burden of production is a showing that the defendant caused environmental harm. The second type, because the definition includes the word "unreasonable," has caused confusion among the courts regarding the sufficiency of proof.

Processing & Books involved the second type of air pollution.⁸⁹ In an earlier opinion, *Incinerator, Inc. v. Pollution Control Board*,⁹⁰ Illinois Supreme Court held that the Agency has the burden of proving all the essential elements of the type of air pollution charged, and that the Board must weigh this proof by reference to the four factors set out in the act as bearing upon the reasonable-

consist "of five technically qualified members, no more than three of whom may be of the same political party, to be appointed by the Governor with the advice and consent of the Senate."

85. ILL. REV. STAT. Ch. 111-½, § 1032 (Supp. 1973).

86. ILL. REV. STAT. Ch. 111-½, § 1033(a) (Supp. 1973). The act requires the Board to make its determinations "[a]fter due consideration of the written and oral statements, the testimony and arguments that shall be submitted at the hearing."

87. 64 Ill. 68, 351 N.E.2d 865 (1976).

88. The definition reads: "'Air Pollution' is the presence in the atmosphere of one or more contaminants in sufficient quantities and of such characteristics and duration as to be injurious to human, plant, or animal life, to health, or to property, or to unreasonably interfere with the enjoyment of life or property." ILL. REV. STAT. Ch. 111-½, § 1003(b) (Supp. 1973).

89. 64 Ill. 2d at 76, 351 N.E.2d at 869.

90. 59 Ill. 2d 290, 319 N.E.2d 794 (1974).

ness of the pollution, "basing thereon its findings and orders."⁹¹ Although the Board fined the defendants in *Processing & Books* and entered a cease and desist order, the appellate court reversed on the basis of its interpretation of *Incinerator*. The appellate court determined that the Agency must introduce evidence upon each of the four criteria in order to meet its burden of proof. This result changed the burden of proof set out in the act by forcing the plaintiff to provide such evidence, thereby increasing the costs of litigating, in order to meet its sufficiency requirement.

Due to this effect, the supreme court explained its earlier ruling:⁹²

Standing alone, this provision is entirely clear. If there is doubt as to who must prove what, it must come from some other source. The appellate court apparently concluded that this court's opinion in the *Incinerator* case had placed upon the Agency the burden of proving, by evidence which it offered, the unreasonableness of the respondent's conduct in terms of each of the four criteria mentioned in section 33(c). No such result was intended by our decision in *Incinerator*.

The Board must consider the four criteria of section 33(c) in its findings, the court said, but the Agency does not have to prove that a respondent's conduct is unreasonable as to each of these four criteria.⁹³ The intent of the legislature, therefore, has been retained.

In *Processing & Books*, expert and lay testimony was presented as to the source of the odors. The Agency offered extensive evidence that the residents of the area were prevented from recrea-

91. *Id.* at 300, 319 N.E.2d at 799. ILL. REV. STAT. Ch. 111-½ § 1033(c) (Supp. 1973) reads:

In making its orders and determinations, the Board shall take into consideration all the facts and circumstances bearing upon the reasonableness of the emissions, discharges or deposits involved including, but not limited to:

- (i) the character and degree of injury to, or interference with the protection of the health, general welfare and physical property of the people;
- (ii) the social and economic value of the pollution source;
- (iii) the suitability of the pollution source to the area in which it is located, including the question of priority of location in the area involved; and

- (iv) the technical practicability and economic reasonableness of reducing or eliminating the emissions, discharges or deposits resulting from such pollution source.

92. 64 Ill. 2d at 76, 351 N.E.2d at 869.

93. *Id.* at 75, 351 N.E.2d at 869.

tional activities outdoors as a result of the odors and that different disposal methods would produce less odor. The supreme court found that respondents "seriously interfered with the enjoyment of life and property in ways that could reasonably have been prevented" and reversed the appellate court's decision.⁹⁴

Under the Illinois act, then, a showing that a respondent has caused environmental harm is all that is necessary for the burden to shift to the respondent. The courts have stated that a finding of pollution can be based upon the testimony of private citizens,⁹⁵ and that a showing of the potential for pollution (instead of evidence of actual pollution) is sufficient to support a denial of a permit.⁹⁶ The Agency uses expert testimony, but it appears unnecessary to produce detailed technical and scientific data concerning the pollution in order to shift the burden.⁹⁷

CONCLUSION

These six states have sought to aid plaintiffs in environmental litigation by attempting to shift the burden of production of evidence to the defendant. Their efforts have met with varying degrees of success. Illinois has been very successful. The access to a state agency designed to prosecute environmental claims certainly lessens a plaintiff's financial burden. But for one reason or another, the Illinois statute has not been copied, perhaps because of the relatively elaborate procedural mechanisms adopted by Illinois and the expense of maintaining such a state agency.

The Michigan model has been more widely adopted, but its impact is questionable in Indiana, Connecticut, and South Dakota where there have been no cases on it since its adoption. However, as demonstrated by the Minnesota cases, the Michigan version can be particularly useful. Under the statute, the court has shifted the burden to the defendant once the plaintiff meets the two step test for establishing a *prima facie* case. If a feasible and prudent alternative is presented, the environmentally harmful activity will be enjoined. The defendant bears the risk of nonpersuasion of the affirmative defense and proof of economic hardship alone will not

94. *Id.* at 77-78, 351 N.E.2d at 870.

95. *Marblehead Lime Co. v. Pollution Control Bd.*, 42 Ill. App. 3d 116, 355 N.E.2d 607 (1976).

96. *City of Pekin v. EPA*, 47 Ill. App. 3d 187, 361 N.E.2d 889 (1977).

97. *Marblehead Lime Co. v. Pollution Control Bd.*, 42 Ill. App. 3d 116, 355 N.E.2d 607 (1976).

rebut plaintiff's case. These provisions make it easier for a plaintiff seeking to protect the environment to prove its case.

Furthermore, it seems logical that since the statutes are so similar, Connecticut, Indiana, and South Dakota will follow the Michigan and Minnesota cases. A use of Minnesota and Michigan cases as precedent would result in elimination of balancing when a prudent and feasible alternative which is less harmful to the environment is presented (as in Minnesota) and would establish a standard for measuring the sufficiency of defendant's rebuttal evidence (as in Michigan). By considering interpretations by other states, each state should be able to reach the best result most efficiently.

Part 4
Energy and the Environment

NATIONAL ENERGY PLANNING AND ENVIRONMENTAL RESPONSIBILITY†

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America's energy problems, accentuated in recent years by the 1973-74 Arab oil embargo and the frigid 1976-77 winter, result from the nation's prodigious consumption of energy, coupled with its overreliance on dwindling petroleum resources and its underreliance on abundant domestic energy alternatives. The United States can move towards a state of energy self-sufficiency only by pursuing both an aggressive conservation policy and a vigorous energy research, development, and demonstration (RD&D) program. The Energy Research and Development Administration (ERDA) was established in early 1975 to direct the nation towards such a beneficial pattern of energy use and production. This article discusses some of the major elements of ERDA's national energy RD&D plan, and emphasizes the design of energy RD&D alternatives to minimize adverse environmental effects. In October, 1977, all ERDA functions were absorbed by the Department of Energy. Today, ERDA's energy research, development, and demonstration initiatives are being continued within this new organizational framework.¹

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Hereafter in this article, ERDA will be referred to without repeating the fact that in October, 1977, the agency's functions were absorbed by the new Department of Energy. ERDA was created by the Energy Reorganization Act of 1974, Pub. L. No. 93-438, 88 Stat.

I. BACKGROUND TO A CRISIS

The people of the United States have long considered limitless energy a birthright. They felled great expanses of forests in the nation's first century. Later, they turned to another abundant material, coal, which soon took over an increasing percentage of the national fuel supply. For most of this century, the United States has relied upon vast quantities of petroleum and natural gas for its energy needs. Now the nation must face a harsh reality: it is drawing too heavily upon the least plentiful resources. Finite oil and gas reserves are rapidly being depleted. Since 1970, domestic production of petroleum has declined steadily and, since 1973, natural gas production has joined in this downward trend. Although the exploitation of Alaskan resources should cause a temporary reversal, it is unlikely that domestic supplies can meet indefinitely a steadily growing demand.²

Given these disturbing facts, three courses of action appear open: one, the United States can seek alternative energy resources while decreasing reliance on oil and natural gas; two, it can make up for domestic supply deficiencies by importing; or three, it can do both. So far, the greatest reliance has been placed on the second course, and this has been costly. The quantity of foreign oil imported to the U.S. each year has increased dramatically, to a record high of 47.9% of total petroleum consumption during the first half of 1977.³ The

1233 (codified at 5 U.S.C. §§5313 *et seq.*, 42 U.S.C. §§5801 *et seq.* (Supp. IV 1974)), and officially commenced operations in January, 1975. In August, 1977, Congress completed action on the bill designed to establish the Department of Energy, and the next day the President signed the Department of Energy Organization Act, Pub. L. No. 95-91, 91 Stat. 565 (1977) (codified at 42 U.S.C. §7253). On October 1, the Department of Energy came into being as the 12th cabinet agency. Along with ERDA, the new department absorbed the Federal Energy Administration, the Federal Power Commission, and elements of a number of other government agencies.

² Analyses undertaken within ERDA's *Market Oriented Program Planning Study* indicate that the energy crisis is essentially a liquids crisis. Faced with a depleting domestic resources base, the only new options for oil appear to be oil shale (at approximately present-day world conventional oil prices) and synthetic oil liquids derived from coal (at considerably higher prices). Since only the former is likely to be introduced in the relatively near future, rising petroleum imports coupled with increased prices may have to be borne until alternative energy sources can be developed. See ERDA, *MARKET ORIENTED PROGRAM PLANNING STUDY, FINAL REPORT* (ERDA internal memorandum). In contrast, the natural gas situation is potentially manageable to the end of the century. This country produced 20.1 trillion cubic feet of natural gas in 1975, and 19.8 trillion cubic feet in 1976. Production is expected to decrease during the coming years, and then temporarily increase as a result of Alaskan supplies and as a response to higher prices. Today, the U.S. imports about 5% of its annual demand for natural gas.

³ FEA MONTHLY ENERGY REVIEW (part 2, Aug., 1977). See also OFFICE OF PLANNING, ANALY-

price tag has risen accordingly. Between 1970 and 1976, the expense for imported oil rose from \$3 billion to \$35 billion per year. The bill for foreign oil in 1977 soared to approximately \$45 billion, due, in part, to increased gasoline demand. President Carter has predicted that "unless we act, we will spend more than \$550 billion for imported oil by 1985—more than \$2,500 for every man, woman, and child in America."⁴

There have also been important changes in the source of our imports. In 1976, the Arab members of the Organization of Petroleum Exporting Countries (OPEC)⁵ collectively supplied one third of all U.S. petroleum imports. This represents an increase from a contribution of one fourth of petroleum imports in 1975. Meanwhile, Venezuela's import contribution dropped from 14.3% in 1975, to 11.7% in 1976, and Canada's contribution dropped from 11.8% to 7.2%.⁶ Thus, the United States has become more reliant on those countries which embargoed exports of petroleum to this country only a few years back.

These facts demonstrate the importance of reducing our oil and natural gas consumption and aggressively developing alternative energy resources. Only by conservation and fuel substitution can the growing outlays for oil and natural gas be lessened and the spectre of another embargo eliminated.

II. NATIONAL ENERGY PLANNING

ERDA has played a pivotal role in the national drive toward energy independence. During its near three year lifetime, it was responsible for developing new energy technologies and for ensuring their compatibility with the environment. Initially, ERDA's task was the submission of a National Plan for Energy Research, Development and Demonstration to the President and Congress.⁷ This plan outlined energy strategies for the near-term (now to 1985), the mid-term (1985 to the end of the century), and the long-term (be-

SIS, AND EVALUATION, ERDA, 4 QUARTERLY REPORT OF FOREIGN AND DOMESTIC DEVELOPMENTS AFFECTING ENERGY (Aug., 1977).

⁴ President Jimmy Carter, Energy Address to the Nation, April 18, 1977, Washington, D.C., reprinted in, 13 WEEKLY COMP. OF PRES. DOC. 560 (April 25, 1977).

⁵ The Arab segment of OPEC includes Iraq, Saudi Arabia, Kuwait, Qatar, United Arab Emirates, Libya, and Algeria.

⁶ See OFFICE OF PLANNING, ANALYSIS, AND EVALUATION, ERDA, 4 Quarterly Report of Foreign and Domestic Developments Affecting Energy (Aug., 1977).

⁷ ERDA REP. NO. 48 (1975), A NATIONAL PLAN FOR ENERGY RESEARCH, DEVELOPMENT, AND DEMONSTRATION: CREATING ENERGY CHOICES FOR THE FUTURE.

yond the year 2000). The original plan was published in June, 1975, and was revised in April, 1976,⁸ and again in June, 1977.⁹

On April 20, 1977, within three months of assuming office, President Carter sent a special energy message to a joint session of Congress. In this message, and in the White House publication, *The National Energy Plan*,¹⁰ the President announced seven major national energy goals: (1) to reduce the annual growth of U.S. energy demand to less than two percent; (2) to reduce by half the share of imported U.S. energy; (3) to reduce oil imports to less than 6 million barrels per year; (4) to achieve a ten percent reduction in gasoline consumption; (5) to increase coal production by at least 400 million tons per year; (6) to insulate U.S. residences and buildings; and (7) to use solar energy in more than two and a half million homes. The planning strategies to be used included conservation, increased production and more rational pricing of fuels, a changeover from scarce oil and natural gas to coal and (to the extent necessary) to uranium, and the development of reliable new energy sources.

ERDA was charged with the responsibility for most of the RD&D required by this plan. It was and remains a difficult task. The changeover from oil and natural gas fuels to a broad range of alternative resources is going to take time. Once the fundamental research has been completed for a given energy concept, which might take many years, a pilot plant is generally required. The design and construction of such plants takes from four to six years. The development of a commercial prototype may involve another five to ten years. An equal period of time is generally required before the new technology can achieve a significant market penetration.

In the near-term, national energy planning will emphasize several approaches, including increased conservation, direct utilization of coal and uranium, and enhanced recovery of oil and natural gas. These planning approaches represent technologies which are either already well developed or will require a relatively short period of time before becoming so. Other energy technologies are being developed that will become increasingly important during the 1985-2000,

⁸ ERDA REP. NO. 76-1 (1976), A NATIONAL PLAN FOR ENERGY RESEARCH, DEVELOPMENT AND DEMONSTRATION: CREATING ENERGY CHOICES FOR THE FUTURE.

⁹ ERDA REP. NO. 77-1 (1977), A NATIONAL PLAN FOR ENERGY RESEARCH, DEVELOPMENT AND DEMONSTRATION.

¹⁰ The National Energy Plan (Apr. 29, 1977) (White House doc.). See also PRESIDENT OF THE UNITED STATES, PROPOSED LEGISLATION TO ESTABLISH A NATIONAL ENERGY POLICY, NATIONAL ENERGY ACT, 95TH CONG., 1ST SESS., H.R. DOC. NO. 95-138 (1977).

mid-term period, including geothermal energy, solar heating and cooling, and synthetic fuel production. Nuclear breeder, solar electric, advanced geothermal (hot dry rock and magma), and fusion technologies represent potential energy sources for the 21st century.

III. CONSERVATION

In the spring of 1976, ERDA assigned conservation technologies to the highest national priority category, due in part to delays in developing new energy resources and in part to the need to economize energy.¹¹ Likewise, the Carter Administration has given particular emphasis to conservation. There are many persuasive reasons for pursuing this goal. Each barrel of oil saved through conservation is one less barrel that needs to be imported. Moreover, increased oil conservation can often reduce imports at less cost than increased oil production, since the cost of improving the efficiency of energy use is generally less than the cost of producing its equivalent amount. Conservation is generally environmentally beneficial, although individual conservation steps may, on occasion, adversely affect occupational or public health. While energy savings can and must be made by improving efficiency, the introduction of energy conservation technology takes time and is limited by such factors as cost, human aspiration, and the laws of thermodynamics.

Numerous opportunities exist for greater efficiency in the use of energy. Some technologies are sufficiently developed to facilitate their relatively quick move into the marketplace. Efficiency opportunities can be divided into three principal categories: transportation, residential/commercial, and industrial.

A. Transportation

The transportation sector of the economy accounts for approximately one quarter of total domestic energy use.¹² Passenger vehicles, such as cars, taxis, and motorcycles, are the largest energy users, currently accounting for nearly 15% of annual domestic en-

¹¹ See *ERDA Authorization Fiscal Year 1977, Part I—Conservation: Hearings before the Subcomm. on Energy Research, Development and Demonstration of the House Comm. on Science and Technology*, 94th Cong., 2nd Sess. (1976); *1978 ERDA Authorization: Hearings before the House Comm. on Science and Technology*, 95th Cong., 1st Sess. (1977). See also ERDA REP. NO. 76-36 (1976), REVIEW OF THE ENERGY CONSERVATION RESEARCH, DEVELOPMENT, AND DEMONSTRATION PROGRAM.

¹² FEA MONTHLY ENERGY REVIEW (part 2, Aug., 1977).

ergy consumption.¹³ The energy-using units in this sector (vehicles) have a much shorter "life" than those in the industrial and residential sectors; thus, in this sector conservation is particularly appropriate. The automotive fleet in the United States is recycled every 10-15 years and, consequently, production changes which improve fuel efficiency can appreciably reduce the national consumption of gasoline in less than a decade.

In the near-term, automotive energy conservation will be achieved through modifications of existing types of vehicles. Smaller, lighter cars with modified engines will provide a good portion of the governmentally mandated improvements in fuel efficiency. Other feasible modifications to present-day cars which can contribute to conservation are computer controlled ignition systems, carburetor "lean burn" adjustments for greater air/fuel mix ratios, continuously variable ratio transmissions, lock-up torque converters, and controlled speed accessory drives.¹⁴ Significant progress in many areas of automobile conservation has already been made in the United States, with new car efficiency increasing by approximately 34% from model years 1974 to 1977.¹⁵

Two new combustion engines, the turbine and the Stirling, hold considerable promise for the mid-term. Both engines involve continuous combustion processes which reduce air pollutant emissions while improving fuel economy. Electric automobiles, which provide a fuel-switching capability rather than a fuel saving *per se*, are also being developed for use as we approach the year 2000.

B. Residential/Commercial

The residential/commercial sector accounts for just over one third of domestic energy use.¹⁶ Slightly more than 60%¹⁷ of this sector's energy consumption is used for the heating and cooling of some 70

¹³ Based upon calculations from data appearing in STATISTICAL ABSTRACT OF THE UNITED STATES 1976 (Gov't Printing Office 1976).

¹⁴ The continuously variable ratio transmission provides a better match between road load and engine fuel consumption. The lock-up torque converter provides a fourth speed or "over-drive" for automatic transmissions. Once connected, the converter is essentially locked to eliminate slip, thereby duplicating to a large extent the characteristics of a manual transmission. The controlled speed accessory drive operates accessories at a constant velocity, regardless of road or engine speed. This mechanism can save between 5 and 8% in fuel consumption.

¹⁵ See *EPA Releases 1977 Automobile Miles Per Gallon Figures*, ENVIRONMENTAL NEWS (Sept. 22, 1976) (EPA publication).

¹⁶ See *FEA MONTHLY ENERGY REVIEW* (part 2, Aug., 1977).

¹⁷ The National Energy Plan (Apr. 29, 1977) (White House doc.).

million dwelling units and approximately 24 billion square feet of commercial space.¹⁸ Because of the characteristically long life of both residential and commercial buildings, conservation systems which can be retrofitted (furnished with new parts or equipment) into the existing stock of buildings are very important, as are those which can be incorporated into new buildings at the design stage.

One type of energy system appropriate for design or retrofit application is the "heat pump," a device capable of transferring heat from relatively cool areas to other warmer areas by means of a compressible refrigerant. The typical heat pump transfers two to three times the amount of heat per unit of energy as does a conventional electrical resistance heating system. However, because their initial capital cost exceeds that for conventional resistance systems, heat pumps may not be utilized where energy costs can be either deducted as an expense or passed on to a tenant. Attention is therefore being given to increasing the variety of heat pumps, improving their economics, extending their application, and informing consumers of their potential long-term benefits.

Widely publicized energy savers, such as improved insulating practices and materials, can be used in both new and old buildings. The so-called integrated community energy system is another, though more elaborate, energy conserving approach with particular applicability to new residential and commercial complexes as well as to those undergoing extensive redevelopment.¹⁹

C. Industrial

Like the residential/commercial sector, the industrial sector consumes just over one third of all energy used in the United States.²⁰ Many industrial processes have low energy efficiency ratings (as low as 10% in some direct heating processes) because they evolved during a period of abundant, low-cost energy. Therefore, significant

¹⁸ 1978 ERDA Authorization: Hearing before the House Comm. on Science and Technology, 95th Cong., 2d Sess. (1977).

¹⁹ By examining the utility functions required to maintain a given community, including electrical energy for lighting and appliances and thermal energy for space conditioning, as well as waste collection and disposal, and potable water supply, it is possible to combine or integrate functions with energy savings benefits together with reduced environmental impacts and cost reductions. Because communities differ, various technologies for implementing integrated community energy systems are being studied. Some technologies may be more suitable than others in providing the requirements of community programs such as revitalizing a central business district, creating a new development, or undertaking a major redevelopment.

²⁰ FEA MONTHLY ENERGY REVIEW (part 2, Aug., 1977).

opportunities exist for the development of new energy-efficient processes, but these improvements will no doubt require substantial capital investments.

Two promising and generally applicable industrial energy processes under development are "waste heat recovery" and "cogeneration." Waste heat is produced by a wide variety of industrial processes and equipment. Presently, this energy usually warms adjoining lakes, rivers, and coastal waters, often resulting in adverse ecological impacts. The recovery and harnessing of this energy through waste heat recovery systems could supplement existing energy sources. Cogeneration, on the other hand, is the simultaneous production of electricity and process heat. In 1950, this process supplied 15% of domestic energy; today, the figure has dropped to 4%. Despite this disuse, small generators which simultaneously produce electrical and thermal energy in dispersed cogeneration systems can be less capital-intensive, more efficient, and more environmentally benign than large, central station nuclear or fossil fuel plants. Cogeneration is ideally suited to industrial parks with a mix of facilities which require electrical power and process energy, and which also exhaust substantial amounts of recoverable waste energy. Moreover, cogeneration is adaptable to a number of fuel systems and can substantially reduce the complexity of a facility's overall energy distribution system.

IV. PRINCIPAL SOURCES OF ENERGY

The nation's conservation efforts are paralleled by vigorous fuel production efforts and by research into the development of potentially inexhaustible energy sources for use during the upcoming century.

A. Coal

Although coal is the most abundant domestic fossil fuel, in 1976, coal supplied only some 18% of domestic energy consumption.²¹ Currently coal is being extracted at about the same levels as during World Wars I and II.²² Coal's relatively poor acceptance is due to a number of factors. First, large amounts of coal are inconveniently situated for extraction and shipment to major markets. Second, the

²¹ See The National Energy Plan (Apr. 29, 1977) (White House doc.).

²² U.S. GEOLOGICAL SURVEY BULL. No. 1412 (1975); P. AVERITT, COAL RESOURCES OF THE UNITED STATES (1974).

mining and burning of coal have unfortunate health and environmental consequences. Occupational health hazards associated with coal mining include black lung, silicosis, cancer, explosions, falling rock, and tunnel floodings; the burning of coal results in atmospheric pollutants which have been implicated as contributing factors in several human diseases. In addition, the danger exists that the widespread use of coal and other fossil fuels may release sufficient carbon dioxide into the atmosphere to result in a potentially hazardous global warming trend.²³

Despite these difficulties, coal will probably become an increasingly important element in the domestic energy mix through the near- and mid-terms.²⁴ Production for 1976 was 665 million tons, compared with 640 million tons in 1975, and 603 million tons in 1974. President Carter has announced a production goal of at least one billion tons per year by 1985. By the end of the century that figure may rise to 1.8 billion tons.²⁵

An improved process known as "fluidized-bed combustion" is now being developed to solve the environmental problems associated with coal burning.²⁶ This process removes more than 90% of potential sulphur dioxide emissions and reduces nitrogen oxide and particulate matter emissions to levels below those established by the Environmental Protection Agency for new coal burning installations.²⁷ The fluidized-bed concept, like the conventional process, involves burning coal to produce heat. This heat either boils water to produce steam or heats a fluid contained in tubes. However,

²³ According to one study, during the last 110 years, the CO₂ content of the Earth's atmosphere increased by 11.5% to 13.5% thus reinforcing the belief that further build-up will occur. See PANEL OF ENERGY AND CLIMATE, NAT'L RESEARCH COUNCIL OF THE NAT'L ACADEMY OF SCIENCES, *ENERGY AND CLIMATE* (1977). In fact, it was concluded that the climatic effects of CO₂ release could be the primary limiting factor on energy production from fossil fuels during the next few centuries. In response to this problem, ERDA created an Office of Carbon Dioxide Environmental Effect Research within the Office of the Assistant Administrator for Environment and Safety. This new office will develop and carry out research programs as well as interact with other organizations having a scientific or policy interest in the CO₂ problem.

²⁴ See notes 8 and 9, *supra*.

²⁵ The Federal Energy Administration estimates that coal consumption during the next decade will grow by about 4.8% per year, resulting in a 1985 production of 1.04 billion tons. Most of this forecast increase is expected to occur in the electric utility sector. See FEA, *NATIONAL ENERGY OUTLOOK*, (1976). The *National Energy Plan* later established such an increase as a national goal. The *National Energy Plan* (Apr. 29, 1977) (White House doc.).

²⁶ For review of coal technology programs, see ERDA REP. No. 76-10 (1976), *FOSSIL ENERGY PROGRAM REPORT*, at 15. See also ERDA REP. No. 76-63 (1976), *FOSSIL ENERGY RESEARCH PROGRAM OF THE ENERGY RESEARCH AND DEVELOPMENT ADMINISTRATION*, at 19.

²⁷ 40 C.F.R. §60D. This standard, promulgated on December 23, 1971, is now being reviewed by the EPA.

unlike the traditional process of burning powdered coal entrained in a jet of combustion air, the fluidized-bed method burns crushed coal mixed with dolomite limestone suspended in slow moving air. The resultant combustion, in the presence of a sulphur dioxide absorber such as limestone, captures the pollutants that might otherwise be released from the burning of medium and high sulfur coal. Hence, from the environmental perspective, the coal burning process can be significantly improved through the use of this new technology.

B. Uranium

America's uranium resources, used in light water reactors,²⁸ will play a major role both in the near-term and beyond. During the first half of 1977, nuclear plants using these resources produced over 10% of the nation's electricity and about 3% of its overall energy supply.²⁹ Although forecasts of future capacity vary, ERDA has projected between 330,000 and 380,000 MWe (megawatts electric) of nuclear-generated electricity by the year 2000.³⁰

Nuclear systems are attractive for several reasons. First, they not only use domestic rather than imported resources, but they also help conserve limited supplies of oil and natural gas. Second, nuclear-generated electricity is generally cheaper than oil, gas, or coal-generated electricity, and is therefore popular with both utilities and consumers. Finally, nuclear generating plants have excellent environmental and safety records. No individual has suffered injury from a radiation-related accident within the United States commercial nuclear power industry.³¹

Nuclear waste management, on the other hand, presents a more pressing environmental concern: ERDA has estimated that by the

²⁸ Light Water Reactors (LWR) use water as the primary coolant/moderator. These reactors are fueled by slightly enriched uranium 235.

²⁹ See note 9, *supra*. Statistics on total electric power generation in the United States are maintained by the Edison Electric Institute. Also, the nation's utilities provide breakdowns as to how their electricity is generated—hydro, coal, nuclear, etc. Details as to the portion of generated power accounted for by nuclear facilities are maintained by the Nuclear Regulatory Commission and the Atomic Industrial Forum.

³⁰ DIV. OF REACTOR RESEARCH AND DEVELOPMENT REPORT, ERDA (1977); UPDATE: NUCLEAR POWER PROGRAM INFORMATION AND DATA (1977); Patterson, U.S. Uranium Supply Demand Overview (Jan. 24, 1977) (ERDA paper presented at American Nuclear Society, Executive Conference on Uranium Supply).

³¹ Not one radiation related casualty has occurred in the 175 reactor-years of operation during the past two decades. To these 175 reactor-years can be added another 1,400 reactor-years of accident-free operation of naval reactors employed in more than one hundred U.S. Navy surface and submarine vessels.

year 2000, the cumulative high-level radioactive solid wastes produced by commercial nuclear reactors will fill a cube about 20 meters on a side.³² The most promising technology for handling this waste involves solidifying the liquid wastes into stable forms such as glass, then encapsulating the resultant solids and storing them in stable geologic formations deep within the earth. This approach has received considerable attention,³³ but the necessary technologies have not yet been fully demonstrated. ERDA has launched a program to develop, construct, and operate by 1985 the first of a number of terminal storage repositories. A thorough public review of the program is proposed: first at the end of 1978, when prototype technologies, complete designs, and initial environmental criteria for waste repositories should be developed; and then again in 1981, when licensing of the first repository should be completed.

C. Enhanced Recovery of Oil and Gas

Despite the increased use of coal and uranium and despite vigorous conservation efforts, demand for domestic oil and natural gas will remain heavy throughout the century. Thus it will be necessary to maximize extraction efforts from extant and future fields in the continental United States, in Alaska, and offshore the Atlantic, Gulf, Pacific, and Arctic coasts.

Since it is estimated that over two-thirds of the oil discovered in the United States remains unrecovered, new recovery technologies are vitally important. ERDA estimates that these technologies could lead to the recovery of between 0.5 and 2 million barrels of oil per day by 1985.³⁴ The domestic resource base from which this petroleum is being sought consists of an estimated 290 billion barrels of normal-gravity oil, 107 billion of heavy oil, and 30 billion of bitumen.³⁵

Potential sources of new natural gas include gas-bearing shales

³² ERDA REP. NO. 76-43 (1976), ALTERNATIVES FOR MANAGING WASTES FROM REACTORS; ERDA REP. NO. 1543 (1976), FINAL ENVIRONMENT STATEMENT: EXPANSION OF U.S. ENRICHMENT CAPACITY; FED'L ENERGY RESOURCES COUNCIL (1976), MANAGEMENT OF COMMERCIAL RADIOACTIVE NUCLEAR WASTES: A STATUS REPORT.

³³ ERDA REP. NO. 76-0701 (1976), PROCEEDINGS OF THE INTERNATIONAL SYMPOSIUM ON THE MANAGEMENT OF WASTES FROM THE LWR FUEL CYCLE; Dep't of Energy Release No. R-77-017 (1977), DOE ANNOUNCES NEW SPENT NUCLEAR FUEL POLICY.

³⁴ ERDA REP. NO. 77-20 (1976), RESEARCH AND DEVELOPMENT IN ENHANCED OIL RECOVERY: FINAL REPORT; ERDA REP. NO. 77-15/1-2 (1976), MANAGEMENT PLAN FOR ENHANCED OIL RECOVERY: PETROLEUM AND NATURAL GAS PROGRAM.

³⁵ ERDA REP. NO. 76-10 (1976), OIL, GAS AND SHALE TECHNOLOGY.

and associated sandstones, coal seams and the rock surrounding them,³⁶ and geopressed aquifers.³⁷ A resource base of up to 3,000 trillion cubic feet may exist for the gas-bearing shales; some 800 trillion cubic feet for the coal seams; and between 5,000 and 50,000 trillion cubic feet for the geopressure reserves.

ERDA is presently participating with industry in 36 principal projects designed to stimulate the recovery of oil and natural gas.³⁸ These projects include oil and gas recovery by fluid displacement, formation fracturing, and thermal methods.

D. Solar Heating and Cooling

The use of solar heating and cooling systems can contribute to reducing long-term consumption of oil and natural gas. In 1975, ERDA estimated that solar energy technology could supply up to 25% of the nation's energy needs by the year 2020, if the costs of collecting and utilizing solar energy could be reduced substantially.³⁹ This result was confirmed by an economic study conducted two years later.⁴⁰ This study showed that by 2020, sufficiently developed solar technologies could provide the energy equivalent of 7.9 billion barrels of oil.

Progress in solar technologies has been substantial, especially since ERDA has worked with other federal agencies to stimulate the development of solar energy systems. In January, 1976, Congress awarded \$1 million to ERDA for the installation of 143 residential

³⁶ In this context, a coal seam refers to any bed of coal, regardless of its thickness.

³⁷ Geopressed water reservoirs have been discovered which extend more than 700 miles under the Texas coastal plain from the Mexican border all the way into southeastern Louisiana. They run 50 to 100 miles inland and up to 150 miles offshore. Subsurface exploration has shown that sedimentary rocks at a depth of two or more miles are under-compacted, and thus the fluids they contain bear part of the lithographic load (overburden). When a well is drilled into an average sedimentary formation, the water it contains rises under essentially normal pressure more or less to the surface. In the case of a geopressed zone, however, abnormal conditions alter the result. Heat flowing outward from the Earth's interior passes through the undercompacted sediments and is trapped by overlying impermeable clay beds. The water in the sediments absorbs part of this heat. When geopressed waters flow to the surface through wells, they are not only quite hot, but exert an excess pressure of several thousand pounds per square inch. From such waters, thermal and hydraulic energy can be drawn as well as energy derived from the trapped methane gases.

³⁸ ERDA REP. NO. 76-10 (1976), OIL, GAS AND SHALE TECHNOLOGY.

³⁹ ERDA REP. NO. 75-49 (1975), NATIONAL SOLAR ENERGY RESEARCH, DEVELOPMENT AND DEMONSTRATION PROGRAM. See also DIV. OF SOLAR ENERGY, ERDA REP. NO. 23A (1976), Nontechnical Summary of Distributed Solar Power Collector Concepts; DIV. OF SOLAR ENERGY, ERDA REP. NO. SE 102 (1976), SOLAR ENERGY FOR SPACE HEATING AND HOT WATER.

⁴⁰ ERDA REP. NO. 77-DSE-115/1 (1977), SOLAR ENERGY IN AMERICA'S FUTURE: A PRELIMINARY ASSESSMENT.

solar units in 27 states. In August, 1976, ERDA selected 34 nonresidential buildings in 22 states and the Virgin Islands for the installation of solar heating and/or cooling systems. By July, 1977, 158 residential and 17 commercial systems were in operation, and 5,331 residential and 166 commercial systems were under contract. The Department of Defense has selected fifty civilian and eighty military residential units for the installation of solar heating and hot water systems. And the Department of Agriculture is testing the application of solar heating to grain drying, food processing, crop drying, greenhouses, and animal shelters.

E. Geothermal Energy

The recovery of energy from geothermal resources could become significant in those regions of the United States where such resources exist.⁴¹ However, commercialization of geothermal processes has been inhibited for a number of reasons, including unavailability of reliable and detailed information on geothermal resources, extraction problems, lack of fluid handling technology, and inadequate knowledge as to potential health and environmental impacts. ERDA has studied these problems, and estimates that roughly 6,000 MWe could be produced by 1985 from domestic geothermal resources, and that this contribution could grow to 40,000 MWe by the end of the century.

Of the various kinds of geothermal resources, only hydrothermal energy is commercially developed.⁴² There are two varieties of hy-

⁴¹ The heat within the Earth is a vast potential source of power if it can be economically utilized. This heat is believed to result from the natural decay of radioactive materials, and is thought to be virtually inexhaustible. Where underground heat sources are relatively close to the surface, they can be—and indeed in some locations for many years have been—tapped for various applications. Geothermal energy comes from a number of sources, including natural steam, hot water, hot dry rock structures, high-temperature molten magma, and geopressured water reservoirs. So far, steam has been used principally to generate electricity, while hot water (with and without steam) has been employed for heating. Research is underway to investigate the feasibility of tapping these other geothermal resources.

Geothermal resources are located in many parts of the world. The "Geysers" in California is the only large, vapor-dominated system that has to date been drilled extensively in the U.S. Another vapor-dominated system is the "Mud Volcano" in Yellowstone Park. For a more in-depth survey of domestic geothermal resources, see White & Williams, *Assessment of Geothermal Resources of the United States—1975* (1975) (ERDA Paper).

⁴² See DIV. OF GEOTHERMAL ENERGY, ERDA REP. NO. 75-87 (1975), *GEOTHERMAL ENERGY RESEARCH, DEVELOPMENT AND DEMONSTRATION PROGRAM: DEFINITION REPORT*; ERDA REP. NO. 77-9 (1977), *GEOTHERMAL ENERGY RESEARCH, DEVELOPMENT AND DEMONSTRATION*; ERDA REP. NO. ERHQ-001 (1977), *GUIDELINES TO THE PREPARATION OF ENVIRONMENTAL REPORTS FOR GEOTHERMAL DEVELOPMENT PROJECTS*.

drothermal energy: vapor-dominated (dry steam containing relatively few water droplets), and fluid-dominated (hot water). Dry steam has been used for some time to generate electric power in the Geysers area of northern California. In many western cities, such as Klamath Falls, Oregon and Boise, Idaho, houses have been heated by hot water wells for many years.

F. Synthetic Fuels

Liquid and gaseous fuels can be generated by converting coal, oil shale, tar sands, waste materials, or biomass⁴³ into synthetic fuel substitutes. This is an attractive concept because it utilizes not only existing energy resources, but also existing distribution facilities and end-use systems. "Synfuels," as these substitutes are often called, are already being experimentally produced in the United States. Synfuel processes include the liquefaction of coal to yield boiler fuels and crude oil substitutes, the gasification of coal to yield both low BTU and high BTU gas,⁴⁴ and the recovery of oil from oil shale, tar sands, waste materials, and biomass.

Oil shale and materials derived from it are chemically complex and contain both organic and inorganic toxins. To evaluate potential risks to humans, scientists expose laboratory animals to these substances and observe them for possible carcinogenic and mutagenic effects. It is too early in the studies to expect results that identify effects on human life.

To deal with environmental problems associated with large-scale synfuel operations, an alternative fuels environmental advisory board should be established. State and local governments would be encouraged to participate in the planning of synfuel plant sites by providing both environmental and socio-economic information.

⁴³ Biomass is the formation of carbon-hydrogen compounds through photosynthesis. Biomass includes agricultural and forest residues, certain urban solid wastes, and land and marine energy crops grown and harvested for their energy content. It is estimated that some 200 billion dry tons of biomass are produced annually on planet Earth. Traditionally, biomass has been converted into energy through small wood fires which achieve very low (typically 5%) thermal efficiency. Used efficiently, however, biomass can make a major contribution to our energy requirements. Bioconversion involves first the photosynthetic production of organic matter (biomass) and then its conversion into fuels, heat, and electricity.

⁴⁴ Coal gasification can provide a high BTU substitute for natural gas (methane), as well as a lower BTU gas substitute for boiler and other industrial fuels.

*G. Essentially Inexhaustible Energy Resources For The
Long Term*

If conservation and the previously discussed energy resources are exploited, we should be able to meet many, if not most, of our energy requirements throughout the near- and mid-terms. But oil, gas, coal, and uranium are in limited supply, while energy sources such as geothermal suffer regional and technical constraints. To provide for America's long-term energy future, we must discover renewable and essentially inexhaustible energy systems.

The most developed of these long-range resources is the liquid metal fast breeder reactor.⁴⁵ This process is attractive to energy planners because it does not depend on natural uranium, which has a scarce fissionable isotope. However, the breeder reactor's future is uncertain. President Carter, concerned over environmental safety and nuclear proliferation, has restructured the breeder program and has indefinitely deferred a commercial demonstration program.

The earth's sun is an inexhaustible resource whose energy can be harnessed to produce electricity as well as to provide space heating and cooling.⁴⁶ ERDA has been active in the development of solar energy systems that collect solar radiation and convert it into both electricity and heat.⁴⁷ Presently, two types of such systems are being considered: one, a central receiver system which utilizes a large array of sun-tracking mirrors to concentrate solar radiation on a central thermal collector (boiler); and two, a distributed thermal collector system, which uses numerous small concentrating systems to collect the radiation. During the summer of 1976, the first U.S. built central receiver system was successfully tested at the world's largest solar energy testing facility in Odeillo, France. A central receiver facility is now under construction in the United States. No distributed collector system has yet been tested, although two large-scale distributed collector experiments are presently in design.

⁴⁵ The breeder reactor is a kind of nuclear "furnace" that produces more fuel—in the form of plutonium—than it consumes. Whereas conventional nuclear power reactors use from 1 to 2% of the potential energy in their uranium fuel, breeders can utilize about 60%. See, Div. OF REACTOR RESEARCH AND DEVELOPMENT, ERDA REP. NO. 75-67 (1975), LIQUID METAL FAST BREEDER REACTOR PROGRAM: OVERALL PLAN.

⁴⁶ In general, relatively low temperature collector systems are used for the heating and cooling of buildings, intermediate temperature systems are used for process heat, and high temperature systems are used for electricity production.

⁴⁷ ERDA REP. NO. 76-159 (1976), SOLAR THERMAL ENERGY CONVERSION; ERDA REP. NO. SE-103 (1976), CENTRAL RECEIVER SOLAR THERMAL POWER SYSTEM: PHASE 1—10-MW ELECTRIC PILOT PLANT.

Other approaches to generating electrical power from the sun involve photovoltaic cells (solar cells) used for energy conversion; wind energy conversion (windmills), and ocean thermal gradient usage, which takes advantage of the temperature differential occurring between the sun-warmed upper levels of the ocean and the colder, deeper levels. The cost of photovoltaic cells dropped in 1976 from \$21 per watt to \$15.50 per watt. It is hoped that by 1986, the price will be 50 cents per peak watt,⁴⁸ thus enabling solar cells to compete in many uses with conventional sources of electric power. ERDA's program of photovoltaic RD&D and market stimulation is designed to increase annual solar cell production from 100 kilowatts in 1975, to 500,000 kilowatts in 1986. Wind systems⁴⁹ should become cost competitive in selected regions of the country by the mid-1980's. The United States can achieve annual wind-generated energy production equivalent to 3 to 6 million barrels of oil per year by 1985, and the equivalent of 230 to 410 million barrels of oil per year by 2000. ERDA's program for the development of ocean thermal energy⁵⁰ will include the demonstration of a 100 MWe offshore power plant by 1985, and the fostering of public sector/private sector cooperation in the development of commercially competitive technologies.

While the environmental impacts of these emerging solar technologies are relatively benign, several environmental and safety issues must be considered. Solar thermal electric conversion may affect local water quality and climate; moreover, this process is land-

⁴⁸ Peak wattage is the output of photovoltaic cells in full sunlight under specified conditions. See ERDA RELEASE NO. 76-305 (1975), GREATER EFFICIENCY IN LOW-COST SOLAR CELLS ACHIEVED AT UNIVERSITY OF DELAWARE; DIV. OF SOLAR ENERGY, ERDA REP. NO. 76-161 (1976), PHOTOVOLTAIC CONVERSION PROGRAM SUMMARY REPORT.

⁴⁹ Winds are generated by the sun; hence, wind systems are properly placed in the solar energy category. Wind conversion systems are essentially large windmills. If present wind energy systems were mass-produced, their costs would be competitive with other forms of energy, at least in high-wind locations. However, industry does not consider the present market large enough to attract the needed development capital. This led ERDA to embark on a cooperative project with NASA to develop a 100-KW system which recently underwent testing at Sandusky, Ohio. While results to date are encouraging, it is evident that much remains to be done in the area of systems economics. The unit is now operating as part of the Ohio Power Company grid in order to gain utility experience. See DIV. OF SOLAR ENERGY, ERDA REP. NO. 77-32 (1977), FEDERAL WIND ENERGY PROGRAM.

⁵⁰ The enormous quantities of heat stored within the oceans can be converted into electricity by exploiting the oceans' natural thermal gradients. Ocean thermal systems use warm surface water to heat a secondary system liquid, such as ammonia, causing it to expand as a gas and turn a turbine connected to a generator. Then, cold water from the depths of the ocean condenses the ammonia and the cycle is repeated. See DIV. OF SOLAR ENERGY, ERDA REP. NO. 76-142 (1976), OCEAN THERMAL ENERGY CONVERSION—PROGRAM SUMMARY.

intensive. Photovoltaic materials may present health concerns to occupational workers during material extraction and cell production; hence, protective regulations may be required. Wind energy towers require special structural considerations, both for operational safety and for reduced television signal interference. In the case of ocean thermal energy conversion plants, the vast quantities of ocean water pouring through condensers and the attendant water evaporation might seriously affect the local marine environment.

Fusion is the most undeveloped inexhaustible energy resource in terms of its potential for commercialization. Since fusion involves combining nuclei rather than breaking them apart, temperatures of approximately 100 million degrees Celsius are required.⁵¹ Fusion will probably not produce any appreciable amount of energy until the beginning of the next century, due to uncertainties concerning its technical and economic feasibility. And, although the desired reaction produces only non-radioactive helium, fusion is not without certain radioactivity problems: first generation fusion reactors will be fueled by radioactive tritium, which in small quantities poses only a relatively mild radiological hazard, but in large quantities may pose a more severe threat.

V. CONCLUSION

With the advent of the manned space program, the public became aware of what environmentalists had long been saying. Citizens began to realize that unless steps were taken to protect the planet earth, it might some day become unlivable. Apollo 8 astronaut William A. Anders' commentary from lunar orbit in December, 1968, roused the nation's awareness: "I think that all of us subconsciously think that the Earth is flat or at least almost infinite. Let me assure you that, rather than a massive giant, it should be thought of as [a] fragile Christmas-tree ball which we should handle with considerable care."

⁵¹ The clearest example of fusion is the energy system of the sun. Fusion involves the high speed collision of plasma ions. One of the special properties of plasma gases is that their ions frequently collide with one another; the hotter the plasma gets, the harder they collide. If the plasma's temperature is sufficiently elevated, the ions collide with enough force to overcome their natural tendency to repel each other. When this happens, they combine or fuse to form new nuclei, releasing energy in the process. In the case of a fusion reactor, what is needed is a way to generate a very hot plasma and hold onto it long enough for many fusions to take place, thus releasing the desired energy. See DIV. OF MAGNETIC FUSION ENERGY, ERDA REP. NO. 76-110/0-4 (1976), FUSION POWER BY MAGNETIC FUSION ENERGY.

This observation was kept in the forefront of ERDA's early planning and will continue to be emphasized as the functions of the agency are integrated into the new Department of Energy.

COAL IN CONTEXT: ITS ROLE IN THE NATIONAL ENERGY FUTURE†

JOHN P. HOLDREN*

I. THE NATURE OF THE ENERGY DILEMMA

The disruptive coal strike of 1977-78 should serve to remind us that, notwithstanding the formidable technical challenges of resurrecting old energy sources and developing new ones, the most intractable energy problems of all reside in the behavior of people. People are imperfect and unpredictable: they run supertankers aground, install valves upside down in drilling rigs, build schools on radioactive uranium-mill tailings, cut corners on mine safety and go on strike. If one thing is clear about energy, then, it is this: We must not try to base our energy future on the sudden perfectability of people.

However, if people are the bane of rational energy planning, they are also its goal. By this I mean that we should not be interested in energy for its own sake, but in energy only in forms, quantities and applications that increase the sum of human well-being. Leaping into the task of getting more energy without asking carefully whether the energy will really make us better off risks the trap of fanaticism—redoubling one's efforts after forgetting the goal. To put coal in context, then, let us look more closely at the links between energy and well-being.

The heart of the energy dilemma is that production and use of energy exert both positive and negative influences on well-being. Supplying energy to the economy contributes to the production of a stream of economic goods and services generally supportive of well-being. But disruptions of the social, biological and geophysical components of the environment, arising from the processes of getting, converting and using energy, detract from well-being by diminishing the stream of environmental (nonmarket) goods and services these components provide. It follows from the nature of the two-sided relation between energy and well-being that it is possible in principle, at some specified level of energy use already achieved and for a specified mix of technologies providing it, that a further increase in the acquisition and use of energy will produce incremental damages to well-being (*i.e.*, the sum of incremental economic and environmental costs) exceeding the incremental benefits. It is possible, in short, to suffer from having too much energy, too soon, as well as from having (in the more

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traditional view of the energy problem) too little, too late.¹

Pondering energy issues in this symmetric framework, in fact, suggests a particularly useful way to contrast short term and long term perspectives concerning what "the energy problem" actually is. Historically, analysts have been preoccupied with the economic side of the relation between energy and well-being, and this preoccupation continues to dominate most people's perceptions of the nature of the energy problem. It has been presumed that the economic benefits of adding to energy supply invariably outweigh the sum of the economic and environmental costs, and accordingly, the main energy-related threats to well-being in the short term have been seen as problems of "too little": (1) depletion, rising prices and falling security of supply of the particular energy sources—petroleum and natural gas—upon which industrial society has become most heavily dependent; and, (2) the high economic costs and long time delays associated with the immediately identifiable alternatives to conventional oil and gas supplies, namely Arctic and offshore oil, imported liquefied natural gas, expanded coal production, fission reactors and solar collectors.

The complex issues intertwined in this "too little" perspective include, among others: the political ramifications of the world's growing dependence on a relatively small number of petroleum exporting nations; the differential impacts of rising energy prices on rich and poor nations and individuals; the impacts of energy shortages on jobs; and the uncertainty and dispute concerning the degree to which more efficient end-use of energy can be elicited by higher prices or by regulation, without undue economic disruption.²

Gradually intruding on this perspective, rooted in the economic side of the energy/well-being relation, has been a growing interest in energy's effects on well-being through the environmental linkages. Since the late 1960s, in fact, increased attention to identifying and quantifying environmental costs and to incorporating these in the decision-making process has established the principle that they can be important enough to justify postponement, significant modification or even abandonment of specific energy-supply projects.³ Environmental costs of energy supply that have come under intensified scrutiny in this period include, among others: loss of life and health from pollution and accidents; disruption of climate, nutrient cycling and other natural processes; contribution of nuclear power

1. See generally P. EHRLICH, A. EHRLICH & J. HOLDREN, *ECOSCIENCE* (1977); Holdren, *Technology, Environment and Well-Being: Some Critical Choices*, in *GROWTH IN AMERICA*, (C. Cooper ed. 1976).

2. See generally E. COOK, *MAN, ENERGY, AND SOCIETY* (1976); *ENERGY POLICY PROJECT OF THE FORD FOUNDATION, A TIME TO CHOOSE* (1974); 1 & 2 ANNUAL REV. OF ENERGY, (J. Hollander ed. 1976, 1977).

3. For the best record of the evolution of this trend, see PRESIDENT'S COUNCIL ON ENVIRONMENTAL QUALITY, *ENVIRONMENTAL QUALITY* (published annually since 1969 and available from the Government Printing Office, Washington, D.C.).

to the rate and extent of proliferation of nuclear weapons; and, the social impact of precipitous regional development in support of energy facilities.

These increasingly pervasive concerns must be considered more than a mere perturbation on traditional perceptions of what the energy problem is about. These concerns suggest that what the political trauma over short term energy choices increasingly reflects is not an inability to expand energy supply at some cost, but rather a growing perception that the cost—when the economic and environmental costs are considered together—is too high. This phenomenon of increased attention to the environmental side of the energy/well-being relation—and, accordingly, to the “too much” interpretation of where energy-related threats reside—almost certainly is not a temporary aberration. Instead, it is the initial phase of a natural transition to a perspective on the energy problem shaped as much by awareness of environmental constraints as by fascination with narrow economic measures of well-being.

The perspective in which the long-term energy situation should be viewed is qualitatively different, then, from the historical-traditional perspective with which, until recently, the energy problem was nearly universally seen. The long-term perspective necessarily is governed by the totality of linkages in the energy/well-being relation, rather than being dominated by the economic linkages, because it is precisely the balancing of costs and benefits through all the links that determines how much energy should be provided and, accordingly, how much energy-derived good can be done. Environmental characteristics of long-term energy technologies, including especially the scale and rates of change of social and environmental costs at high use rates or high cumulative usage, become central rather than peripheral factors in choosing one mix of sources over another. Among the “inexhaustibles” identifiable today as potential energy sources for the very long term—fission breeder reactors, fusion and various forms of solar—these considerations are likely to favor the solar possibilities even if narrow economics do not. The result will likely be a world energy economy based much more heavily on solar energy in the long term than most people now suppose.⁴

II. CRITERIA FOR TRANSITION ENERGY SOURCES

What of the transition that will bridge the gap between the predicaments of the short term and the possibilities of the long? This intermediate

4. See A. LOVINS, *SOFT ENERGY PATHS* (1977). Mr. Lovins' is the most widely circulated treatise supporting the position that our future energy sources will be largely solar in nature. See generally D. HAYES, *RAYS OF HOPE* (1977); COUNCIL ON ENVIRONMENTAL QUALITY, *SOLAR ENERGY: A REVIEW OF PROGRESS AND RECENT POLICY RECOMMENDATIONS* (1978) (available from the Government Printing Office, Washington D.C.); Von Hippel & Williams, *Toward a Solar Civilization*, 33 BULL. ATOM. SCIENTISTS 12 (1977).

period—close enough to be shaped substantially by today's knowledge but far enough away not to be constrained entirely by the momentum of yesterday's decisions—is the one for which today's policy makers have the greatest responsibility. The appropriate criteria for making energy choices for the transition can be summarized under the following headings: reliability, economy, expandability, versatility and environmental tolerability.

Reliability in an energy source means that the source is dependable and that its availability can be controlled. Expandability means its production has the potential to grow with needs, to expand the availability of energy in total and to replace sources whose production is declining. Versatility means it can be matched readily in form to a variety of classes of end use. Environmental tolerability means that the environmental costs of its use do not outweigh the economic benefits.

Pondering the possibilities in the context of these criteria leads inexorably to the conclusion that the best energy source for the transition is energy conservation. Conservation means not sudden curtailment but rather steady increase, through technological improvements, in the amount of goods and services derived from each unit of energy used—from each gallon of fuel, each pound of coal, each kilowatt-hour of electricity. Although most people are unaccustomed to thinking of conservation as a "source" of energy, it is a genuine one: A barrel of heating oil made available for other purposes by means of better insulation, for example, is as genuine a contribution to national energy supply as an extra barrel pumped out of the ground. And increasing the efficiency with which buildings, appliances, vehicles and industrial processes use energy to deliver the goods and services people want is generally faster, cheaper, cleaner, safer and more reliable than expanding energy supply by prying more BTUs from the ecosphere.⁵

As good as conservation is, however, we cannot conserve everything. Conventional or unconventional sources other than conservation must be brought to bear as well. Oil and gas, however, are part of the problem defining the transition more than they are part of the solution. The exact quantity of oil and gas that will ever be economically extracted is still open to debate, and a technological miracle in advanced recovery could buy some unexpected time; but we cannot count on anything but a decline in the fractional contribution of oil and gas to the national energy supply.

5. The enormous potential for reductions of the energy needed to produce a dollar of GNP, through conservation measures which are economically rational, has been documented extensively in the past few years. See, e.g., Demand and Conservation Panel of the Committee on Nuclear and Alternative Energy Systems, *U.S. Energy Demand: Some Low Energy Futures*, 200 *SCIENCE* 142 (1978); Ross & Williams, *The Potential for Fuel Conservation*, 79 *TECH. REV.* 48 (1977); Schipper, *Raising the Productivity of Energy Utilization*, in 1 *ANNUAL REV. OF ENERGY* 455 (J. Hollander ed. 1976).

It is this anticipated decline in availability of oil and gas as much as expected growth in total energy use that produces the gap other sources must fill. Geothermal energy is a possibility in some areas but cannot play a major role in the national picture before the long term (post-2000), if then. The breeder reactor is clouded by uncertainty about technology, economics, safety and the vulnerability of the plutonium fuel cycle to terrorism and proliferation. It *might* emerge from all of this as a viable energy source for the long run, but it presently cannot be counted on and it cannot be important before 2000. Fusion is fascinating but still far away; it cannot be important before 2010.⁶

What remain as the major contenders for roles complementing conservation as energy sources for the transition are coal, conventional (non-breeder) nuclear fission, and renewables (mainly solar heat, biomass, wind, hydropower and solar electricity). In what follows, the characteristics of coal on the criteria listed above are summarized with occasional comparisons to the nuclear and renewable competitors. The most detailed attention is given to the environmental criterion.

III. COAL

A. *Reliability, Economy, Expandability, Versatility*

The United States has a great deal of coal, and its location and quality are well established. The recoverable reserves in the United States (coal of known location thought to be economically minable with present technology) amount to some 260 billion short tons after allowance for unrecovered fractions of 50% in deep mining and 15% in surface mining.⁷ The energy content of these recoverable reserves is about six thousand quads (1 quad = 1 quadrillion or 10^{15} BTU), compared to 1976 United States coal production of sixteen quads and domestic total use of marketed energy forms in the same year of about seventy-five quads.⁸ Identified coal resources "in place" in the United States, which classification includes deeper (six thousand versus one thousand feet) and thinner (fourteen versus twenty-eight inches) seams than the reserves, and which makes no allowance for incomplete recovery, amount to more than six times the recoverable reserves; and the addition of "hypothetical" resources in place, which accounts for coal whose existence is suspected but not proven, brings the total to fifteen times the recoverable reserves. If as much as half of this staggering total of four trillion tons of coal in place were ultimately

6. See generally EHRLICH, EHRLICH & HOLDREN, *supra* note 1; Holdren, *Fusion Energy in Context: Its Fitness For the Long Term*, 200 SCIENCE 168 (1978).

7. See COMMITTEE ON NUCLEAR AND ALTERNATIVE ENERGY SYSTEMS, REPORT OF THE RESOURCE GROUP ON COAL (1978) (available from the National Academy of Sciences, Washington, D.C.); U.S. DEP'T OF INTERIOR, ENERGY PERSPECTIVES 2 (1976).

8. U.S. DEP'T OF COMMERCE, STATISTICAL ABSTRACT OF THE UNITED STATES 593 (1977).

recoverable, it would represent an energy content of about 40,000 quads. This amount is fifty to one hundred times the energy content of the remaining ultimately recoverable petroleum resources of the United States,⁹ and it is fifteen times the energy content of the oil reserves of OPEC.¹⁰ This is also about fifteen times the energy that could be recovered by burning in light-water reactors with plutonium recycle the 4.5 million tons of uranium oxide thought by the Department of Energy to represent this country's potential uranium resources.¹¹

No other country can cut us off from this massive coal resource—the reliability of the resource in that sense is high—but it appears the coal miners can. The 1977-78 coal strike tells us that we have to be prepared to pay for the reliability we seek—that is, to pay the price to make the mines much safer than most are today and to pay attractive wages to compensate the workers for doing the dirty and demanding job that coal mining will remain.

These considerations lead naturally to the next criterion, economy. Coal today is the cheapest of the fossil fuels on an energy basis.¹² Price increases have been fought by government as inflationary and by the coal industry as damaging its competitiveness with nuclear energy and oil and gas. Specifically, increases in prices have been resisted not only by trying to hold down miner's wages but also by cutting corners on mine safety, land reclamation, and air-pollution control. This resistance is absurd from every standpoint. It has kept the price of energy down, encouraging over-use, by preventing real costs from being internalized. Surely all who believe in the market economy will support the idea that the price of a product should reflect all the costs of producing it. Following this principle will make *all* forms of energy more expensive; a proposition which is not bad but sensible. One result will be to increase the efficiency with which energy is used. Both the technical scope for such efficiency increases and the adjustment capacity of the economy are such that the impacts on

9. The range of estimates is 50 billion to 127 billion barrels. See U.S. DEP'T OF INTERIOR, *supra* note 7, at 93. Gillette, *Geological Survey Lowers Its Sights*, 189 SCIENCE 200 (1975).

10. PETROLEUM PUBLISHING COMPANY, INTERNATIONAL PETROLEUM ENCYCLOPEDIA (1976) estimates OPEC reserves at about 440 billion barrels.

11. See 21 NUCLEAR NEWS 46-47 (1978). "Forward cost" refers to operating and capital costs not yet incurred at the time the estimate was made and is not synonymous with selling price. A forward cost of \$50/lb corresponds to material whose delivered price would probably be two to four times that prevailing today. I have assumed that a light-water reactor with plutonium recycle can extract about 575×10^9 BTU for each ton of U_3O_8 mined. On the once-through fuel cycle prevailing today, and with the lower than anticipated fuel burnups being achieved, the figure would be no more than half as much.

12. The most expensive coal is costlier than the least expensive (regulated) natural gas, but the 1975 average U. S. consumer prices for distillate oil, natural gas, and utility coal were \$2.81, \$1.29, and \$0.81 per million BTU, respectively. See DEMAND AND CONSERVATION PANEL OF THE COMMITTEE ON NUCLEAR AND ALTERNATIVE ENERGY SYSTEMS, *supra* note 5, at Table 1.

the Gross National Product produced by even very large increases in energy prices—a factor of two to four over the next thirty-five years—could be expected to be modest.¹³

The Carter administration's National Energy Plan (NEP) calls for approximately a doubling of annual coal production, from 0.6 billion to 1.2 billion tons per year, by 1985. The possibility of achieving such a rate of expansion has been questioned on three grounds:¹⁴ constraints on the rate at which production can be expanded; constraints on the rate at which coal can be substituted for other fuels in the United States economy; and constraints on the environment. The last two grounds are considered later in this article under versatility and environment. Potential constraints on the rate of expansion of production include the rate at which new mines can be opened (limited by the number of firms with the requisite skills, by the rate at which new miners can be recruited and trained, by the output of the manufacturers of mining equipment and by the availability of capital) and the rate at which the capacity to transport coal can be increased (limited mainly by the supply of coal cars and the condition of the roadbeds in the United States rail system, which moves 75% of United States coal today compared to 15% by barge and 10% by ship, truck and slurry pipeline). Although some outside observers are skeptical, the uniform and vigorously asserted view in the coal industry is that all these potential constraints on the expansion of production would not prevent the attainment of the NEP's goal of 1.2 billion tons per year in 1985, or even more, if the demand materialized and if environmental restraints were not permitted to interfere.¹⁵

Whether the demand materializes or not, of course, hinges largely on the versatility of coal in meeting a variety of end-use needs; more accurately, it hinges on the extent to which coal's well known lack of versatility in this respect can be overcome. Coal lost its position of dominance in the United States energy market (about 75% in 1920) to oil and gas (75% in 1975 versus 20% for coal) largely due to the greater portability, convenience and versatility of the liquid and gaseous fuels. Today coal is considered well-suited for central-station electricity generation (76% of United States domestic coal demand in 1976), but its contribution

13. See generally NUCLEAR ENERGY POLICY STUDY GROUP, NUCLEAR POWER ISSUES AND CHOICES (1977); DEMAND AND CONSERVATION PANEL OF THE COMMITTEE ON NUCLEAR AND ALTERNATIVE ENERGY SYSTEMS, *supra* note 5; COMMITTEE ON NUCLEAR AND ALTERNATIVE ENERGY SYSTEMS, REPORT OF THE MODELLING RESOURCE GROUP (1978) (available from the National Academy of Sciences, Washington, D.C.).

14. For a critical review of all three kinds of constraints, see COMPTROLLER GENERAL OF THE UNITED STATES, U. S. COAL DEVELOPMENT—PROMISES, UNCERTAINTIES (1977) (available from the General Accounting Office). The GAO believes that attaining annual coal production of even one billion tons by 1985 will be difficult. *Id.*

15. See, e.g., METREK DIVISION OF THE MITRE CORPORATION, ACTIONS TO INCREASE THE USE OF COAL: TODAY TO 1990 (1977) (available from the MITRE Corp., McLean, Virginia).

to the remainder of industrial process energy was modest and its direct use as fuel in the transportation, commercial and residential sectors was negligible.¹⁶

Although the NEP places much weight on direct substitution of coal for oil and gas in industrial processes, significantly expanding the role of coal would require movement along one or more of three additional fronts: first, use of coal in small to medium-scale dual-purpose facilities which make electricity and industrial process heat (cogeneration) or electricity and space heat for surrounding residential and commercial buildings (district heating); second, use of synfuels plants to convert coal into liquid and gaseous fuels that can displace oil and gas directly in existing energy-using equipment and distribution grids; and third, expansion of the role of electricity in the United States economy (wherein about 28% of primary energy was used for electricity generation in 1976), by substituting (coal generated) electricity for direct uses of oil and gas.

The first of these directions—cogeneration and district heating—seems the most sensible from the standpoints of economics, thermodynamic efficiency and achievable rate of expansion. Some technical, environmental, and institutional issues, however, require resolution: perfection of the fluidized-bed technologies most suitable for these applications; dispersal of air-pollution sources and coal-transportation systems into population centers; and legal and regulatory problems at the utility-industry interface.¹⁷

The second possibility, synfuels plants, is still more troublesome. The plants seem certain to be highly capital-intensive—almost certainly at least a billion dollars for 50,000 barrels per day of liquefied coal or its gaseous equivalent—and the cost of the product will likely be in the range of \$20 to \$30 per barrel.¹⁸ No significant synfuels industry has yet materialized in the United States, apparently because industry is unwilling to make the large investments required in the face of uncertainty about whether the product will command the price necessary for the investment to be recovered. Even if this hurdle were to be overcome (by government guarantees on the price of the output), the “lumpiness” of the capital investment and the long lead time for construction of the facilities—comparable in scale and complexity to oil refineries—means that expansion of coal’s role by this approach cannot be rapid, at least at first. The outlook for a large contribution from this direction is further dimmed by uncertainties about the health impacts, particularly on workers, at the coal conversion plants, and about availability of water at the western sites where cheap coal would otherwise make

16. See COMPTROLLER GENERAL OF THE UNITED STATES, *supra* note 14, at 25; U. S. DEP’T OF COMMERCE, *supra* note 8, at 599.

17. See Williams, *Industrial Cogeneration*, 3 ANNUAL REV. ENERGY (1978).

18. See U. S. ENERGY RESEARCH AND DEVELOPMENT ADMINISTRATION, ISSUES RELEVANT TO THE DEVELOPMENT AND COMMERCIALIZATION OF A COAL-DERIVED SYNTHETIC LIQUIDS 9 (1976) (available from the U.S. Energy Research and Development Administration, Washington, D.C.).

such plants attractive, as discussed below.

Expansion of the electric sector as a means of expanding the use of coal is almost certainly the most capital-intensive and slowest of all the ways to achieve this goal. This is so not only because of the high capital cost and long construction times of power plants themselves, but also because of the expense of the associated transmission and distribution systems. For most of the end-uses in the United States energy economy, moreover, electricity represents expensive thermodynamic overkill, being likened to cutting butter with a chain saw.¹⁹ The area of end use in which this negative view of the expansion prospects of electricity seems most susceptible to challenge is personal transportation, where some observers continue to believe that a suitable electric automobile would have significant advantages over autos with fuel-burning engines.

One may fairly conclude, all things considered, that although coal's long-term versatility may be considerable, its short-term versatility is quite restricted. None of the approaches to greatly expanding its "territory" among the spectrum of end-uses can work overnight.

How do coal's reliability, economy, expandability and versatility compare with those of its nuclear and renewable competitors? Nuclear fission's reliability is compromised by major uncertainties surrounding its social and political acceptability.²⁰ Economically, its high capital intensity has been compounded by escalation and interest during the long construction periods that have prevailed in the industry, and by often lower than anticipated capacity factors.²¹ Some studies conclude that nuclear power is nonetheless marginally cheaper than electricity from coal in most regions of the United States;²² others conclude that it is marginally more expensive.²³ With the size of government subsidies to nuclear energy hard to sort out and the cost of radioactive waste management and decommissioning of reactors awaiting demonstration, it is difficult to be confident of anyone's economic estimates. Nuclear fission's versatility is even lower than coal's; it is presently used only for electricity generation, and safety considerations mitigate against siting reactors in the urban regions where district heating would be a possibility or in already built-up industrial areas where most cogeneration opportunities exist. These liabilities, coupled

19. For an extensive critique of the economic and thermodynamic liabilities of excessive electrification, see A. LOVINS, *SOFT ENERGY PATHS* (1977).

20. See, e.g., Holdren, *The Nuclear Controversy and the Limitations of Decision Making by Experts*, 32 BULL. ATOM. SCIENTISTS 20, 20 (Mar. 1976); ROYAL COMMISSION ON ENVIRONMENTAL POLLUTION, *NUCLEAR POWER AND THE ENVIRONMENT* (1976) (available from Her Majesty's Stationary Office, London, England).

21. See generally Bupp, Derian, Donsimoni & Treitel, *The Economics of Nuclear Power*, 77 TECH. REV. 14, 15 (1975).

22. See, e.g., NUCLEAR ENERGY POLICY STUDY GROUP, *supra* note 13.

23. See, e.g., COMMITTEE ON GOVERNMENT OPERATIONS, *NUCLEAR POWER COSTS* (1978) (available from the Government Printing Office, Washington, D.C.); C. KOMAROFF, *POWER PLANT PERFORMANCE* (1976) (available from the Council on Economic Priorities, New York, New York).

with uncertainty concerning how rapidly uranium supplies can be produced, make the expandability of fission in the middle term very questionable.

Sunlight, like coal, we possess in abundance, we know where it is, and no one can take it away from us (except the onset of nightfall or bad weather, both of which can be dealt with by design). Solar energy can be harnessed in many ways, some cheap, some expensive, some feasible soon or already, some needing more development. Several technologies based on harnessing sunlight or its immediate derivatives, wind and biomass, are especially promising for the transition period: fixed flat-plate collectors for space heat and water heat; tracking focussing collectors for higher-temperature industrial process heat; wind machines for electricity generation; use of waste biomass (agricultural residues, timber wastes, municipal wastes) for production of portable fuels. The versatility of solar energy for meeting a wide variety of end-use needs is evidently high. Its expandability will depend on economics and on overcoming a degree of societal inertia, and in this respect the pace of developments in the late 1970s is such as to make it difficult to make a sensible statement which will not soon be overtaken by events.²⁴ Apparent costs of many renewable technologies are decreasing, while those of many nonrenewables are increasing. Still, renewables undoubtably *cannot* expand rapidly enough to avoid substantial additional use of coal. The penetration of the renewables for the next decade or two will be biggest in space heat, somewhat more modest in industrial heat and portable fuels, and smallest in electricity. In an assessment based on such preliminary evidence as is now available, however, it would not be very surprising to be proved wrong.

B. Environment

I have argued above that environmental considerations are moving inexorably and justifiably toward a central role in governing energy choices. The topic of environmental effects of energy technology is one of enormous complexity, even if confined to a single energy source such as coal. There are many different kinds of effluents and perturbations (*e.g.*, air pollutants, water pollutants, solid wastes, land disruption), many sources of these (*e.g.*, mining, processing, transportation, combustion), many components of the environment at risk (*e.g.*, public and occupational health, ecosystems, climate, social systems), and many approaches to the measurement and evaluation of damages.²⁵ The following discussion falls under the headings: air pollution and public health; carbon dioxide and climate; acid water and

24. See Lovins, *Soft Energy Technologies*, in 3 ANNUAL REV. ENERGY (1978).

25. See generally Budnitz & Holdren, *Social and Environmental Costs of Energy Systems*, 1 ANNUAL REV. ENERGY 553 (1976); Holdren, *Energy Costs as Potential Limits to Growth*, in THE SUSTAINABLE SOCIETY (Dennis C. Pirages ed. 1977).

ecosystems; miners' health and safety; other effects; and intersource comparisons.

1. *Air Pollution and Public Health.* The most important air pollutants emitted upon combustion of coal are oxides of sulfur (denoted SO_x , emitted mostly as SO_2), oxides of nitrogen (denoted NO_x , emitted mostly as NO) and particulate matter consisting of ash and (separately or embodied in the ash) heavy metals. The task of relating these emissions to consequences in the form of initiation or aggravation of human disease is made exceedingly difficult by a variety of factors, including the following:²⁶

- (1) where pollutants go when they are emitted depends in complicated detail on atmospheric conditions specific to time and place of the emissions;
- (2) the primary pollutants mentioned often undergo chemical and physical transformations in the atmosphere, at rates highly dependent on local conditions, to become secondary pollutants of entirely different toxicological characteristics; important secondary pollutants include gaseous SO_3 and NO_2 , particulate sulfates and nitrates (compounds containing the ions SO_4^{--} and NO_3^-), ozone (O_3) and nitrosamines;
- (3) the physiological effects of different primary and secondary pollutants present in combination often are not additive but synergistic, that is, the combined effect exceeds the sum of the effects that would be expected if the pollutants acted individually;
- (4) human exposed to these pollutants differ in susceptibility according to age and general health, as well as differing in exposure to such factors as cigarette smoke, industrial chemicals, pesticides, food additives, drugs and so on;
- (5) data on incidence of illness and causes of death in populations exposed to air pollution are incomplete and often inaccurate.

Notwithstanding these difficulties, a number of epidemiological studies have demonstrated an association between air pollution of the sorts caused by coal-burning power plants and increased morbidity (illness) and mortality from such diseases as emphysema, bronchitis, asthma, lung cancer, stomach cancer and cardiovascular disease.²⁷ The only such analyses extensive enough to support derivation of dose-response functions relating pollutant concentrations to expected numbers of casualties over a range of

26. For more extensive introduction to these matters, see EHRLICH, EHRLICH, & HOLDREN, *supra* note 1.

27. The best review of this epidemiological evidence is L. LAVE & E. SESKIN, AIR POLLUTION AND HUMAN HEALTH (1977) (available from Johns Hopkins Press for Resources for the Future).

such concentrations have been for oxides of sulfur and particulates present in combination. In this situation, the (secondary) sulfates are thought to be the main culprit, and there is some evidence that the concentration of these is controlled not by the amount of SO_2 emitted but by the quantity of particulate matter available to catalyze the reaction of the SO_2 to sulfates.

These sorts of complexities have made the setting of emission standards a controversial and unsatisfactory business, and they make it a matter of great uncertainty to predict the number of deaths and illnesses which will result from burning a given amount of coal with given control technology in a given place. Illustrative of the wide range of uncertainties is a set of calculations reported in a recent major review²⁸ of this question as follows: The "best estimate" for the number of premature deaths (from heart and lung diseases not including cancer) which would be caused by sulfates from a thousand-megawatt plant burning 3%-sulfur coal in New York City with no controls was sixty-five per year; the uncertainty limits around this estimate extend from ten times smaller to two times larger. Putting the plant in the countryside some three hundred kilometers upwind of New York City, and requiring it to meet the Environmental Protection Agency's present New Source Performance Standards for sulfur emissions, reduced the "best estimate" to four premature deaths per year, and 90% sulfur control reduced it to two (in all cases with an uncertainty range from ten times smaller to two times larger).

The appalling numbers calculated for the worst case of the urban-sited, uncontrolled, high-sulfur plant are often quoted in discussions of the air pollution effects of burning coal, but it is perfectly obvious that no such plants need be permitted, nor will be. More sensible numbers to use for comparison with the disease effects of other energy technologies are the much lower ones—0.2 to 8 premature deaths per year—associated with suitably sited and cleaned-up plants. Given time, there is no reason to believe one cannot do better still: Fluidized-bed boilers and particulate control may be able to cut sulfate effects by another factor of two below the best performance cited above, and low-BTU coal gasification coupled with a combined-cycle power plant might achieve a factor of ten reduction.²⁹ On the other hand, no quantitative estimates yet seem to be available for the disease effects of air pollutants from coal other than the SO_2 /particulates/sulfates/heart-and-lung disease complex. The consequences of coal combustion's emissions of oxides of nitrogen and heavy metals, which could

28. NUCLEAR ENERGY POLICY STUDY GROUP, *supra* note 13.

29. For a description of these and other technologies, *see, e.g.*, G. FERRELL, *ENERGY UTILIZATION AND ENVIRONMENTAL CONTROL TECHNOLOGIES IN THE COAL-ELECTRIC CYCLE* (1977) (available from Lawrence Berkeley Laboratory of the University of California, Berkeley, California); SCIENCE AND PUBLIC POLICY PROGRAM, UNIVERSITY OF OKLAHOMA, *ENERGY ALTERNATIVES: A COMPARATIVE ANALYSIS* (1975).

certainly include significant mutagenic and carcinogenic effects, need much closer investigation, as does the amenability of these emissions to large reductions if the effects require it.

2. *Carbon Dioxide and Climate.* Combustion of any fuel that contains carbon releases carbon dioxide (CO_2) into the atmosphere. Carbon dioxide at a concentration of about 290 parts per million (ppm) is a natural constituent of the atmosphere. At any concentration conceivable in the atmosphere as a whole it is nontoxic to humans and other animals, and it is a nutrient for plants. But this trace constituent plays so crucial a role in governing the Earth's climate that significantly altering its concentration could change the climate, perhaps suddenly and disruptively.

The climatological role of CO_2 is to act as a thermal blanket: by transmitting incoming solar radiation freely but partially trapping outgoing terrestrial radiation, it keeps the Earth's surface significantly warmer than it would be if the CO_2 were absent. Although this thermal blanketing effect has helped produce the hospitable surface environment we know, it is far from clear that an increase in the effect should be welcomed. Such an increase has already been produced by the combustion in this century of very large quantities of fossil fuel. Independent measurements at diverse locations indicate that the atmospheric concentration of CO_2 increased by about 15%, from 290 ppm to 330 ppm, between 1880 and 1975, and the evidence is good that much of the increase came from fossil fuels. In the late 1970s, combustion of about 250 quads of fossil fuel per year worldwide, about a third of it coal, was adding CO_2 to the atmosphere at a rate sufficient to increase the atmospheric concentration by three ppm per year if it all remained there. The best estimates, however, are that only about half of the CO_2 so added remains for long in the atmosphere, with the rest being dissolved in the surface layers of the ocean.³⁰

The increase in atmospheric CO_2 which has already taken place should have increased the average global surface temperature about 0.3 degree centigrade, if all other factors had been constant. Continuation of high growth in the use of fossil fuels—3 to 4% per year—could increase the atmospheric CO_2 content to 375 ppm and add another 0.3 degree centigrade by the year 2000. (It may be noted that coal's CO_2 production per unit of energy delivered is about twice that of natural gas and 50% greater than

30. See Bolin, *The Impact of Production and Use of Energy on the Global Climate*, in 2 ANNUAL REV. ENERGY 197 (1977); STUDY OF MAN'S IMPACT ON CLIMATE, INADVERTENT CLIMATE MODIFICATION (1971). It is possible that systematic deforestation has also made a significant contribution. Combustion or decomposition of a tree adds exactly as much CO_2 to the environment as the tree removed by photosynthesis during its lifetime, so there will be no net effect on CO_2 if every tree that dies or is cut down is replaced; but reducing semipermanently the global inventory of trees, which we might well be doing, would produce an increase of CO_2 . See generally Woodwell, *The Carbon-Dioxide Question*, SCIENTIFIC AM., Jan. 1978, at 34.

oil's, so that substituting coal for oil and gas in the growing world energy economy makes the problem get worse more rapidly.) Significantly, moreover, Earth's climatic machinery is such that the effect of warming due to carbon dioxide is expected to be several times as great near the poles as on the average.³¹ This means that a 0.5 degree centigrade global average warming could cause significant changes in atmospheric circulation (including changes in precipitation patterns), extensive melting of sea ice, and perhaps the initiation of melting from the Greenland and Antarctic ice sheets with a concomitant increase in sea level. The most severe and immediate consequences of such changes would likely be damage to agricultural productivity, which depends on crops highly adapted to prevailing climatic conditions, although more subtle ecological effects such as changes in patterns of disease would also be conceivable.

The global climatic system is too poorly understood to permit the conclusion that another 15 or 20% increase in atmospheric CO₂ from fossil fuels will *definitely* cause an important climatic disruption, but enough is known to support the conclusion that it is at least plausible. Since combustion produces CO₂ in quantities too big to contain—two to three tons of CO₂ per ton of coal burned—the only way to avoid finding out by experiment how much CO₂ the climatic system will tolerate is to stop the growth of fossil fuel use in time. Unfortunately, it is even possible that the level already achieved is too high: it could lead after a sufficient time to an accumulation of CO₂ great enough to tip the global climatic balance. Unless and until better understanding disproves it, this possibility will cast a pall over the future of coal.

3. *Acid Water and Ecosystems.* In the Eastern United States, where coal and the associated rocks are rich in pyrite, the problem of acid drainage from underground and surface mining operations has long been a concern in coal-mining regions. The mechanism is that the pyrite is oxidized to sulfate and sulfuric acid upon exposure to air, with resulting contamination of surface and ground water supplies. The consequences are: loss of water for purposes of drinking, recreation, and industrial use; destruction of stream life; and acidification of soil that renders revegetation difficult or impossible.

Starting in the mid-1950s, another form of regional acidification of surface water and soil water was recognized as a problem of potential importance—acid rain. This problem can affect much larger areas than mine drainage, for its origin is the oxides of nitrogen and sulfur produced in large quantities by fuel burning and transported over large distances by the atmospheric circulation. The oxides are transformed by oxidation

31. Schneider, *On the Carbon-Dioxide-Climate Confusion*, 32 JOURNAL ATMOSPHERIC SCI. 2060 (1975).

and reaction with atmospheric water into nitric and sulfuric acids, which, unless neutralized in further reactions with alkaline compounds in the atmosphere, eventually return to earth in rain.

Rainfall in unpolluted areas is normally slightly acid (pH between 5.5 and 6.5) because water and carbon dioxide combine in the atmosphere to form carbonic acid. In the 1970s the pH of rain over much of the Northeastern United States, where closely spaced industrial centers burn large amounts of sulfur-bearing coal and fuel oil, was less than four.³² Values of 3 to 3.5 were not unusual, and one rain with a measured pH of 2.1 was recorded.³³ (A drop of one pH unit represents a tenfold increase in acidity.) Values of rainfall pH below four have been recorded over much of Northern Europe, where the location and spread of the regions affected are well correlated with major sources of sulfur-oxide and nitrogen-oxide emissions, the growth of those sources, and established patterns of atmospheric dispersion.

The overall effects of acid rain on ecosystems are not well understood, but they have the potential for serious damage. Such rains increase the rates at which nutrients are leached from soils and foliage; they can reduce or exterminate fish populations by acidifying streams and lakes; they can affect soil microorganisms, including those playing crucial roles in the nitrogen cycle; they can influence the behavior of bacterial and fungal pathogens; they can enhance the uptake of the toxic heavy metal cadmium from the soil; and they may interact synergistically with herbicides and other synthetic compounds. Sweden's forests suffered a reduction in growth rates starting in the 1950s, thought to be due to acid rain, and salmon and trout have disappeared from many lakes and streams where the pH has fallen below five.³⁴

The partitioning of responsibility for acid precipitation between oxides of sulfur and oxides of nitrogen is not entirely clear. Since oxides of sulfur come mainly from burning coal and heavy fuel oils while oxides of nitrogen come from all combustion of fossil fuels, and since sulfur-oxide emissions are more readily controlled than those of nitrogen oxides, this uncertainty is of some importance with respect to evaluating how much difference a growing reliance on coal would make. Simply replacing residual fuel oil with coal in electricity generation probably would not aggravate the acid-rain situation, since the emissions of both NO_x and SO_x would not be much different between these two sources. Replacing natural gas in home furnaces with electric space heat from coal-fired power plants, on the other hand, could aggravate the acid-rain problem substantially.

32. NATIONAL ACADEMY OF SCIENCES, AIR QUALITY AND STATIONARY SOURCE EMISSION CONTROL (1975).

33. *Id.*

34. See EHRLICH, EHRLICH & HOLDREN, *supra* note 1.

4. *Miners' Health and Safety.* Coal mining is rightly known as a dirty and dangerous occupation. But there is accumulating evidence that it need not be less healthy or more dangerous than many other occupations in the energy, materials and manufacturing industries, if society decides to pay the bill for maintaining suitable conditions in the mines. Consider first the main occupational illness of coal miners. Coal Workers' Pneumoconiosis (CWP) or Black Lung Disease. CWP is a disorder of the respiratory system occurring in persons exposed to coal mine dust over periods of ten to fifteen years or more. It is similar in its effects to chronic bronchitis and emphysema. The milder of its two forms, called simple or uncomplicated CWP, does not progress once exposure to coal dust stops, and it results in only minor functional impairment—severalfold less severe than that resulting from heavy smoking.³⁵ The more serious form, complicated CWP or Progressive Massive Fibrosis, progresses after exposure stops and even may first develop only after the victim has left mining; it produces serious functional impairment and reduces life expectancy. Diagnosis of CWP is not completely unambiguous; different surveys conducted on large samples of underground coal miners in the early 1970s revealed incidences of 10 to 27% simple CWP and 1 to 2.5% of complicated CWP.³⁶

The 1969 Coal Mine Health and Safety Act³⁷ established standards for respirable dust in United States coal mines, aimed at eliminating or greatly reducing the incidence of CWP, and provided for compensation of miners diagnosed as having the disease. The standard is two milligrams of dust per cubic meter, at which concentration a recent study³⁸ indicates that 35 years exposure produces a 2% incidence of simple CWP and zero incidence of complicated CWP. Compliance with the standard is obtained through better ventilation and by means of spraying water in the mines; government sampling programs seem to indicate that the degree of compliance of minor functional impairment that will then result will surely seem a modest occupational health problem compared to those of many other industries. In the meantime, compensatory payments to existing victims and their dependents have been running at about \$1 billion per year since 1973, eligibility having been greatly broadened over the 1969 Act by the "Black Lung Law" of 1972.³⁹

35. See COMMITTEE ON MINERAL RESOURCES AND THE ENVIRONMENT, COAL WORKERS' PNEUMOCONIOSIS: MEDICAL CONSIDERATIONS, SOME SOCIAL IMPLICATIONS (1976) (available from the National Academy of Sciences, Washington, D.C.).

36. *Id.*

37. 30 U.S.C. § 801-960 (1970).

38. See COMMITTEE ON MINERAL RESOURCES AND THE ENVIRONMENT, COAL WORKERS' PNEUMOCONIOSIS: MEDICAL CONSIDERATIONS, SOME SOCIAL IMPLICATIONS (1976) (available from the National Academy of Sciences, Washington, D.C.).

39. 30 U.S.C. § 901-958 (Supp. IV 1974). The 1972 Act effectively redefined "Black Lung Disease" as any respiratory impairment suffered by a miner. The Act greatly expands the number of people eligible for compensation because bronchitis and emphysema are not excluded. See COMMITTEE ON MINERAL RESOURCES AND THE ENVIRONMENT, *supra* note 35.

The Coal Mine Health and Safety Act also contained a number of provisions aimed at reinforcing a downward trend in accidental coal mining fatalities, which has been underway throughout this century: Accidental deaths per million tons of coal mined underground fell from seven around 1905 to about 0.7 in 1965.⁴⁰ This aim has succeeded, as the death rate per million tons dropped almost in half (from 0.73 to 0.39 per million tons) between 1970 and 1976.⁴¹ Expressed as deaths per million miner-hours (0.41 in 1976) the underground mining fatality rate in 1976 was still about three times that in Great Britain, where miner-training programs are more extensive. Further indication of how much room for improvement remains is to be found in the large variation in injury rates in underground mines between the safest and least safe United States companies—about a factor of twenty difference in 1972-73.⁴² The safest companies had injury rates per million worker-hours lower than the average for all manufacturing and comparable to the rates in real estate and wholesale and retail trade.

5. *Other Effects.* About 56% of U.S. coal production in 1976 came from surface mines, and about 43% of the country's recoverable coal reserves are surface minable.⁴³ Surface mining is much safer for miners than underground mining, and miner productivity (in tons per miner-day) is three to six times higher. The land areas disrupted by surface mining are substantial. The areas actually stripped range from an average of seven hundred acres per million tons in Appalachia to twenty times less in Montana (where the coal seams are much thicker), but the area actually disrupted by haul roads and other mining-related activities can be three times as much.⁴⁴ Where adequate reclamation of strip mined land is not practiced, damages can include: unsightly recontouring (the worst of which is perhaps the steeply sloping highwalls remaining after contour mining on sloping terrain has proceeded to the maximum depth); drastic change or complete loss of vegetation; landslides, erosion, and sedimentation; and the acid-water problems referred to above.

A record of inadequate or nonexistent reclamation in parts of Appalachia and the Midwest where much past surface mining has taken place, coupled with concern over the potential consequences of strip mining in fragile arid ecosystems of the West where much of the remaining stripable

40. COMMITTEE ON MINERAL RESOURCES AND THE ENVIRONMENT, MINERAL RESOURCES AND THE ENVIRONMENT (1975) (available from the National Academy of Sciences, Washington, D.C.).

41. COMPTROLLER GENERAL OF THE UNITED STATES, *supra* note 14. For comparison with public air pollution fatality estimates, 0.4 deaths per million tons of coal corresponds to one death per thousand-megawatt plant per year.

42. ENERGY POLICY PROJECT OF THE FORD FOUNDATION, A TIME TO CHOOSE 182-84 (1974). The between-company variation in fatality rates is similar.

43. See COMPTROLLER GENERAL OF THE UNITED STATES, *supra* note 14.

44. See SCIENCE AND PUBLIC POLICY PROGRAM, UNIVERSITY OF OKLAHOMA, *supra* note 29.

reserves are located, led finally to passage by Congress of the Surface Mining Control and Reclamation Act of 1977.⁴⁵ This rather complex and comprehensive law prohibits mining in certain particularly sensitive areas (such as alluvial valley floors), prohibits leaving highwalls after reclamation, provides strict criteria for mining and reclaiming steep hillsides; requires mined land to be restored to its approximate original contour, and provides for the reclamation of previously abandoned mined land, funded by a tax on currently mined coal. The economic costs of compliance will be substantial but hardly likely to be disabling to the competitiveness of coal. The cost of full reclamation of surface-mined land is \$1,500 to \$5,000 per acre on near-level land, up to the order of \$10,000 per acre on very steep land.⁴⁶ The highest figure would add on the order of \$3 per ton to the cost of coal in Appalachia; on gentler slopes and over thicker seams, the cost addition would be much smaller. Perhaps the biggest remaining issue in strip-mining reclamation is to what extent, and at what cost in water, full reclamation will be possible in the most arid parts of the West, where re-establishing vegetation may be extremely difficult and time consuming and where surface-water and ground-water hydrology is often both fragile and complex.

Indeed, the question of water for all phases of coal development in the arid West is an acute one. Mining and reclamation can consume as much as two to three tons of water per ton of coal extracted, slurry pipelines one to two tons per ton of coal, gasification and liquefaction plants two to nine tons per ton of coal, and power-plant cooling one to six tons per ton of coal.⁴⁷ In many parts of the Western United States where large-scale coal operations are contemplated, water is scarce and the rights to existing supplies have often been overallocated—that is, the legal claims to water exceed its dependable supply. Coal companies could easily outbid farmers for the water, but it is hardly clear whether this would be in the national interest and, if it were so deemed, whether it would be seen to be in the individual states' interests. Perhaps the surest bet for the coal industry is to devise water-frugal technologies which will be able to minimize the competition with other uses of water. If this proves impossible or is simply not done, water will likely be the limiting constraint on Western coal development.

There are still other environmental effects of coal. Problems of water

45. 30 U.S.C.A. § 1201-1328 (West Supp. 1977). See also COMPTROLLER GENERAL OF THE UNITED STATES, *supra* note 14.

46. See Nephew, *The Challenge and Promise of Coal*, 76 TECH. REV. 21, 24 (1973); E. NEPHEW & R. SPORE, COSTS OF COAL MINING AND RECLAMATION IN APPALACHIA (1976) (available from Oak Ridge National Laboratory, Oak Ridge, Tennessee). See generally NATIONAL COAL POLICY PROJECT, WHERE WE AGREE (1978) (available from Center for Strategic and International Studies, George Washington University, Washington, D.C.).

47. For an excellent discussion of water and western energy development, see Harte & El-Gasseir, *Energy and Water*, 199 SCIENCE 623 (1978).

pollution from coal washing and coal-conversion operations, as well as from disposal of fly ash and the residues of flue-gas-desulfurization schemes, need closer attention: the many toxic trace metals present in coal—nickel, cadmium, beryllium, lead, mercury and others—may pose particularly severe problems in this regard. Occupational cancer hazards in coal liquefaction and gasification plants could prove to be important; if so, it would not be the first time that a new technology had the effect of transferring an environmental burden from the public (whose air pollution exposure in this case would be reduced by gasifying or liquefying coal before mining it) to a smaller group of workers. Accidents in the transportation of coal (mostly collisions between trains and automobiles at grade crossings) take a toll of from 0.2 to perhaps one fatality per million tons of coal moved, a figure comparable to the fatalities in underground mining and to estimates of premature deaths from sulfate pollution from cleaned-up power plants; additional transportation risks associated with moving more coal to dispersed small-to-medium-scale facilities need closer investigation. Finally, the impacts of coal development on local and regional social and economic environments—the problem of boom towns, for example—deserve close attention.⁴⁸

6. *Intersource Comparisons.* For the foregoing environmental considerations to be meaningful, they must be put into the context of the environmental dimensions of the nuclear and renewable alternatives. The coal-nuclear comparison has received much attention, and now stands as the classic case of the “apples-and-oranges” problems which arise in intersource comparisons.⁴⁹ Although there are uncertainties on both sides, it is reasonably clear that the short-term death-and-disease impacts of routine operations are greater for coal plants than for nuclear plants. The recent Ford-MITRE study⁵⁰ estimated 0.6 to 1.0 public and occupational deaths per plant-year (0.2 to 0.5 in mining and reactor construction, 0.2 to 0.3 from occupational radiation exposure, 0.2 from public radiation exposure) for nuclear power versus 1.5 to 9.8 per year (0.4 to 8 from air pollution, 0.6 to 1.3 from transportation, 0.5 from mining) for a non-urban-sited coal plant meeting New Source Performance Standards. Much is not included here, however: the cancer hazard of uranium-mill tailings, which might amount to 90 fatalities per reactor-year, but with the 90 deaths spread out at a statistically undiscernible rate over a period of hundreds of thousands of years after the mining is done and the electricity generated,⁵¹ the per-

48. See, e.g., J. KRUTILLA, A. FISHER, & R. RICE, *ECONOMIC AND FISCAL IMPACTS OF COAL DEVELOPMENT IN THE NORTHERN GREAT PLAINS* (1978).

49. See generally Budnitz & Holdren, *supra* note 25.

50. METREK DIVISION OF THE MITRE CORPORATION, *supra* note 15.

51. See COMMITTEE ON NUCLEAR AND ALTERNATE ENERGY SYSTEMS, *REPORT OF THE RISK-IMPACT PANEL* (1978).

haps correspondingly long-lived hazard from heavy metals mobilized by the combustion of coal, which no one has yet ventured to estimate quantitatively; the carcinogenic and mutagenic hazards of other products of coal combustion; and the routine occupational and public radiation exposures from a radioactive-waste-management scheme yet to be determined.

But these are not the greatest difficulties of the coal-nuclear comparison. Nuclear power carries with it a possibility, however, remote, of enormously destructive reactor accidents, and a vulnerability to sabotage with similar effects, that have no counterpart in coal. Neither is there a coal counterpart for fission's link to the proliferation of nuclear weapons and the possible contribution of that phenomenon to the chance of nuclear war. On the other hand, coal's CO₂ and copious chemical pollution pose climatological and ecological risks of a wholly different order than the mostly modest climatological and ecological impacts of nuclear power. Thus the apples-and-oranges problem: one's view of which energy source is worse depends on what kinds of problems one most wants to avoid.

The renewables have been less studied for their environmental impacts than have coal and nuclear power, but the preliminary work that has been done suggests that, excepting large hydroelectric dams and biomass plantations, renewables are likely to have environmental effects significantly less severe than those of coal and nuclear power.⁵² The biggest impacts seem likely to be land use, damages associated with extracting and processing construction materials, transportation hazards for biomass, and chemical emissions from biomass processing and combustion. To the extent that these indeed turn out to be less intolerable than the environmental impacts of coal and nuclear, we shall want, from the environmental standpoint, as much use of renewables in the transition as we can get. The trouble is, as noted earlier, that we cannot get enough quickly enough to do without everything else.

IV. CONCLUSION

Much hinges on whether the growth rate of energy use in this country in the next few decades is high or low. If it is high, as in the past, this will mean deploying virtually every possible source on a crash basis. That is, there will have to be: a simultaneous major expansion of nuclear power, without waiting for resolution of its problems; a rapid expansion of coal, the dirty and disruptive technologies along with the clean; and large oil imports (because even if coal supply could be expanded rapidly enough to avoid this, the ability to use the coal in the necessary range of applications could not be), with devastating effects on the United States balance

52. See, e.g., Holdren, *Environmental Impacts of Alternate Energy Technologies for California: A Preliminary Discussion*, in 2 *DISTRIBUTED ENERGY TECHNOLOGIES FOR CALIFORNIA* (M. Christensen ed. 1977).

of payments and the prospects for international stability.⁵³ Also, it means that the relative role of the environmentally more benign renewables would be small. There is much reason to believe that, in terms of real impacts on well-being, this future would amount to too much energy, too soon.

Low growth, by contrast, offers the opportunity to shape a more sensible energy future: It lets us choose the most suitable technologies, rather than having everything forced down our throat; it buys the luxury of proceeding slowly on nuclear power, and gives us time to bring to bear the ways we know exist to mine coal more safely and burn it more cleanly; it holds out the hope of keeping us below the threshold of a CO₂-climate debacle; and it gives renewables a chance. A low-growth future need not be synonymous with too little energy, too late, because the conservation that brings about the low-growth future will not be curtailment—doing without—but rather will be increased efficiency—doing better, milking more prosperity out of each gallon of oil, each pound of coal, each kilowatt-hour of electricity.

In the context of the picture of the energy situation painted here, coal is far from an ideal energy source. The versatility to permit coal to meet the full spectrum of end-use needs will be won only dearly; its manifold environmental costs will remain troublesome; and someday, unlike the renewables, it will be gone. But in the context of the near-term and medium-term alternatives, coal is too good not to use. Coal, coupled with a large measure of energy conservation and requisite environmental safeguards, can make an important contribution as we steer a judicious course between the twin perils of too little energy and too much.

53. For discussion of the international dimensions, see EHRlich, EHRlich & HOLDREN, *supra* note 1; A. LOVINS, *supra* note 4; Holdren, *supra* note 1.

ENERGY CONSERVATION: THE FEDERAL-STATE NEXUS†

MICHAEL W. GRAINEY*

INTRODUCTION

The energy crisis that currently faces Americans results from a national energy demand that continues to escalate while domestic supplies continue to diminish.¹ The United States is consuming more energy than it produces² or can be assured of obtaining in the future.³ Thus, a comprehensive nationwide conservation program is vital to any meaningful energy policy. Effective energy conservation will both promote more efficient utilization of existing resources and provide additional time for the development of renewable energy sources.⁴

The tenuous nature of this nation's energy supply first became apparent to the American public during the Arab oil embargo of 1973.⁵ During this period, Americans first recognized the need to conserve fuel; it became clear that the energy crisis was not limited to petroleum and pe-

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The comments and opinions expressed in this article are those of the author and do not necessarily reflect the views of the Oregon Department of Energy.

1. See EXECUTIVE OFFICE OF THE PRESIDENT, THE NATIONAL ENERGY PLAN 4 (1977) [hereinafter cited as NATIONAL ENERGY PLAN].

2. United States domestic oil production has been declining since 1970. New production from Alaska, the deep outer continental shelf, and new recovery methods should reverse the decline, but will be unable to satisfy the projected growth in United States demand. *Id.* at vii. Natural gas supplies are also limited. In the United States, natural gas constitutes only four percent of conventional energy reserves, but supplies 27% of energy consumption. *Id.* at 18.

3. During the 1990's the oil-exporting nations will approach their production capacity. *Id.* at 15.

4. Renewable energy sources, such as solar energy, are nondepletable. See generally FEDERAL ENERGY ADMINISTRATION, NATIONAL ENERGY OUTLOOK (1976) [hereinafter cited as NATIONAL ENERGY OUTLOOK]; FEDERAL ENERGY ADMINISTRATION, PROJECT INDEPENDENCE REPORT (1974) [hereinafter cited as PROJECT INDEPENDENCE REPORT].

5. The price of oil imported from the Middle East jumped from \$2.10 per barrel in the fall of 1973 to \$10.24 per barrel by November 1974 and currently stands at \$13.50 per barrel. NATIONAL ENERGY PLAN, *supra* note 1, at 50. The price of average wellhead U.S. crude oil also has increased dramatically. American crude oil sold at an average wellhead price of approximately \$3 in 1972, but was over \$8 in 1975. NATIONAL ENERGY OUTLOOK, *supra* note 4, at 51.

troleum products, but extended to virtually every major source of energy⁶ except coal.⁷ The seeds of the energy crisis, however, had been planted decades before.⁸ In the past, oil and natural gas were abundant and inexpensive. As a result, the United States developed a stock of capital goods that used energy in an inefficient and extravagant manner.⁹ Today, many of our capital goods—from poorly insulated buildings to fuel-inefficient factory equipment to large and powerful automobiles—are tailored to the availability of limitless supplies of inexpensive energy.¹⁰ Domestic sources of energy, however, are declining,¹¹ and even the principal oil-exporting countries will not be able to satisfy the increases in demand expected to occur in the United States and abroad during the remainder of this century.¹² Energy consumption cannot continue to increase at the rate to which Americans have grown accustomed. Energy use patterns will have to adjust to this new energy reality.

Although conservation is recognized as a desirable mechanism for eliminating wasteful consumption of energy, many people do not ap-

6. Project Independence was instituted by President Nixon in 1974 as part of a program designed to achieve self-sufficiency in supplying domestic energy needs by 1985. Although Project Independence did not achieve this goal, it did underscore the shortage of supplies of nearly every major source of energy. PROJECT INDEPENDENCE REPORT, *supra* note 4, at 128.

It is interesting to note that the Carter administration's proposed National Energy Plan has rejected the concept of a crash program of domestic energy production to achieve energy independence. Rather, the administration's goal is to reduce its vulnerability to potentially devastating supply interruptions and to achieve a state of "relative invulnerability." The National Energy Plan proposes that the United States should be prepared to import foreign oil for a number of years so as not to deplete America's own oil resources. Through conservation and increased use of coal, however, the Carter administration hopes to reduce oil imports to a manageable level. The administration also calls for a large strategic petroleum reserve, diversification of foreign sources of oil, and contingency plans to deter interruptions of foreign oil supply and to protect the domestic economy should an interruption occur. NATIONAL ENERGY PLAN, *supra* note 1, *passim*.

7. Coal constitutes 90% of this country's conventional energy reserves, but supplies only 18% of energy consumption. NATIONAL ENERGY PLAN, *supra* note 1, at 63. At current consumption levels, coal reserves are estimated to last at least 300 years. NATIONAL ENERGY OUTLOOK, *supra* note 4, at 163.

As part of its response to the oil shortage, the federal government encourages electric utilities to burn coal rather than oil in their electric generating stations. 10 C.F.R. § 307.3 (1977) (Federal Energy Administration regulations requiring the capability of all new fossil plants to burn coal). Previously, however, the Environmental Protection Agency had issued standards regarding coal use to prevent air pollution. See 40 C.F.R. §§ 60.250-.254 (1977). This illustrates the tensions that may arise between environmental and energy policies. Energy conservation advocates believe that conservation is not inconsistent with environmental concerns, because conservation techniques increase the energy supply by eliminating wasteful consumption. Conservation, moreover, is viewed as one of the cleanest energy strategies. See note 20 & accompanying text *infra*.

8. See NATIONAL ENERGY PLAN, *supra* note 1, at 1-7.

9. *Id.* at 2.

10. *Id.* at 1.

11. See note 2 & accompanying text *supra*.

12. See note 3 & accompanying text *supra*.

preciate the full impact an aggressive conservation program could have on future rates of energy growth.¹³ Initial steps already have been taken toward, what President Carter's National Energy Plan terms, "embrac[ing] the conservation ethic."¹⁴ Recently enacted federal legislation¹⁵ encourages conservation. In addition, a number of states are currently in the process of introducing conservation programs.¹⁶ Despite increased "energy consciousness," however, the actual energy conserving activities of most Americans have not increased significantly.¹⁷ This article will focus on ways in which energy conservation can have a greater impact on the current energy situation. National and local conservation legislation, programs, and policies will be examined. Particular emphasis will be given to the role states can play in the development of a comprehensive, coherent national energy policy.

I. THE ROLE OF ENERGY CONSERVATION

Before examining specific conservation programs, it is important to highlight the benefits¹⁸ that could be realized by an aggressive energy conservation effort. The philosophy underlying conservation, as an affirmative strategy, is not simply to save energy. Rather, conservation embodies an attempt to reorganize patterns of energy usage in a rational manner given the United States' current finite energy supply. The energy situation has been analogized to an economy, with the goal of energy conservation being the achievement of an energy usage consistent with "energy income," rather than the indefinite depletion of the "energy capital" of fixed fuels.¹⁹

13. See notes 18-39 & accompanying text *infra*. Energy conservation also can have a more immediate impact than other energy policies. For example, it is estimated that a significant percentage of poorly insulated homes in the United States could be brought up to strict fuel efficiency standards in less time than it now takes to design, license, and build one nuclear power plant. NATIONAL ENERGY PLAN, *supra* note 1, at 27.

14. NATIONAL ENERGY PLAN, *supra* note 1, at 55.

15. See, e.g., Energy Conservation and Production Act of 1976, Pub. L. No. 94-385, 90 Stat. 1125 (codified in scattered sections of 15, 42 U.S.C.); Energy Policy and Conservation Act of 1975, Pub. L. No. 94-163, 89 Stat. 871 (codified in scattered sections of 12, 15, 42 U.S.C.); Energy Supply and Environmental Coordination Act of 1974, Pub. L. No. 93-319, 88 Stat. 246 (codified in scattered sections of 15, 42 U.S.C.).

16. See notes 113-45 & accompanying text *infra*.

17. FEDERAL ENERGY ADMINISTRATION, THIRD QUARTERLY REPORT TO U.S. HOUSE AND SENATE COMMITTEES ON APPROPRIATIONS, *passim* (1977).

18. See generally D. HAYES, ENERGY: THE CASE FOR CONSERVATION (Worldwatch Institute, Paper No. 4, 1976); 3 CALIFORNIA ENERGY TRENDS AND CHOICES: OPPORTUNITIES FOR ENERGY CONSERVATION (1977) [hereinafter cited as CALIFORNIA ENERGY TRENDS]; GOVERNMENT INSTITUTES, INC., ENERGY TECHNOLOGY II (1975) (proceedings of the second energy technology conference) [hereinafter cited as ENERGY TECHNOLOGY II].

19. CALIFORNIA ENERGY TRENDS, *supra* note 18, at 7. Analogy to an economy does not assume that conservation means no growth in demand. Furthermore, some commentators argue that

Conservation is the "cleanest and cheapest source of new energy supply."²⁰ Saving a unit of energy through better efficiency often costs less than producing the same energy by developing new supply sources.²¹ By utilizing three basic modes of energy conservation, the United States can reduce energy waste substantially in every sector of the economy. The first mode involves sacrifice in performance or lifestyle.²² Examples of this include such measures as turning down the thermostat, instituting a 55-miles-per-hour speed limit, or raising prices.²³ The second measure focuses on making design or technological changes to increase energy efficiency. Good examples of this are insulating buildings to limit heat loss and cogeneration or producing more fuel-efficient automobiles. The third approach involves increased use of alternative energy sources to conserve supplies of nonrenewable sources. Solar and geothermal energy are two of the many alternatives being considered in this area.²⁴ In a larger sense, however, many conservation methods can be considered as relatively inexpensive, alternative sources of energy, because currently wasted energy is used to meet energy needs elsewhere in the economy.

A combination of energy-efficient methods could result in a substantial decline in the rate of growth of energy usage. The projected decline applies in particular to the rate of electricity growth, which President Carter considers to be one of the two most significant long-term energy

the total energy consumption of our nation must continue to increase during the immediate and long-range future, even if successful energy conservation programs are established. See, e.g., McCormack, *Legislative Views on Energy Technology*, ENERGY TECHNOLOGY II, *supra* note 18, at 1.

20. NATIONAL ENERGY PLAN, *supra* note 1, at 35. For a discussion of how dramatic reductions in energy usage can be accomplished without adversely affecting economic growth, see Ross & Williams, *Energy Efficiency: Our Most Underrated Energy Resource*, 32 ATOM SCIENTISTS BULL. 30 (1976).

21. CALIFORNIA ENERGY TRENDS, *supra* note 18, at 1; see NATIONAL ENERGY PLAN, *supra* note 1, at 47.

22. Conservation does not necessarily mean a lower standard of living. Some European countries enjoy comparable standards of living and yet consume less than half as much energy as Americans do. See note 156 & accompanying text *infra*.

23. A major assumption underlying President Carter's National Energy Plan is that federal pricing policy encourages overconsumption of the scarcest fuels by artificially holding down prices. The pricing of oil and natural gas, it was concluded, should reflect the economic fact that the true value of a depletable resource is the cost of replacing it. NATIONAL ENERGY PLAN, *supra* note 1, at 29-30.

Controversy over the best method for accomplishing this result is one of the primary reasons Congress has not passed a comprehensive energy plan. A mechanism must be implemented that will encourage industries to develop new resources without also allowing them to reap large windfall profits as a result of circumstances unrelated to the marketplace or risk-taking.

24. Many diverse solar, geothermal, biomass and other technologies are in various stages of development. See generally NATIONAL ENERGY PLAN, *supra* note 1, at 75-79.

questions that his National Energy Plan must solve.²⁵ A number of public utilities have quantified the impact conservation has had, and will continue to have, on the growth rate of electricity. For example, the New England Power Pool's ten-year forecast for electric utility usage for the years 1978-87 anticipates an average annual load growth for the member electric utilities of 4.5%.²⁶ This percentage is a drop of nearly 20% from the 5.4% growth rate of the year before. The change in load growth has been attributed to the impacts of both conservation and economic stagnation on residential and industrial customers.²⁷ Most recent ten-year forecasts show that 2900 megawatts less capacity will be needed than was projected for the region in the ten-year forecasts filed only a year earlier.²⁸ Individual utilities have experienced dramatic decreases in both peak load and total annual load growth rates. Northeast Utilities Company's annual peak demand is expected to grow at only 3.5% during the 1978-87 period as compared to a 5.1% estimated growth rate filed a year earlier for the 1977-86 time frame.²⁹ New England Electric System expects its peak load and its total kilowatt hour growth to be between 2 and 3% during the next ten years.³⁰

Projections by various state and regional agencies in the Pacific Northwest show a similar decline in the rate of growth of total energy usage for that region.³¹ The Oregon Department of Energy projects energy consumption for that state to increase by an average of 2.5% a year for the next twenty years, about half the rate of the preceeding ten years.³² Moreover, this figure does not even take into account recent conservation legislation passed by the state legislature.³³ The Northwest Energy Policy Project, a project funded by the joint federal-state Pacific Northwest Regional Commission, has reached similar conclusions on future energy usage for the states of Idaho, Washington, and Oregon. The Project found that the application of economically profitable conservation

25. The other problem involves finding a replacement for petroleum in transportation. *Id.* at 32.

26. ELECTRICAL WEEK, Jan. 9, 1978, *passim*.

27. *Id.*

28. *Id.*

29. *Id.*

30. *Id.*

31. See generally OREGON DEPARTMENT OF ENERGY, OREGON'S ENERGY FUTURE (1978) [hereinafter cited as OREGON'S ENERGY FUTURE]; NORTHWEST ENERGY POLICY PROJECT, ENERGY CONSERVATION POLICY—OPPORTUNITIES AND ASSOCIATED IMPACTS (1978) (final report to the Pacific Northwest Regional Commission) [hereinafter cited as NORTHWEST ENERGY POLICY PROJECT]; WASH. PUBLIC INTEREST RESEARCH GROUP, ALTERNATIVES FOR THE PACIFIC NORTHWEST: A PUBLIC INTEREST PERSPECTIVE (1977).

32. OREGON'S ENERGY FUTURE, *supra* note 31, at 6.

33. See notes 113-16 & accompanying text *infra*.

measures to existing and new residential units in these states could reduce space and water heating usage to less than one-half of current typical household levels by the year 2000.³⁴ The same study indicates that in these three states the rate of growth for electricity and for energy in general is roughly 3% annually, only half of the historic rate of growth since 1964.³⁵

The Northwest Energy Policy Project quantified the impact a variety of energy conservation policies would have, noting that "the full potential for energy conservation will not be realized unless strong policies are enacted to bring about adoption of the various energy conservation measures."³⁶ The study concluded that an expanded information and education program could increase conservation activities, bringing savings of 17% for electricity and 7% for all energy that otherwise would have been consumed by the year 2000. A policy program that included interest loans for investments in energy conservation would lead to a savings of 19% of electricity and 8% of total energy demand.³⁷ Regulatory policies such as building codes and traffic controls would increase the expected savings to 22% for electricity and 11% for all other energy requirements.³⁸ Finally, if effective mandatory requirements were in force, it was projected that there would be a savings of 40% for electricity and a savings of 35% overall.³⁹

These studies demonstrate the impact conservation can have on reducing rates of energy. It is clear that the ultimate solution to the United States current energy crisis cannot be achieved simply by reducing the rate of energy consumption. What these studies do indicate, however, is that conservation is having some impact already, and that it also has the potential to mitigate substantially current energy shortages. Whether conservation will be effective is primarily a function of proper implementation. The remainder of this article will address this question by examining the roles of the federal government and state governments in energy conservation efforts.

34. 2 NORTHWEST ENERGY PROJECT, *supra* note 31, at vii.

35. *Id.* at vii (Table I).

36. The city of Seattle, based upon its own forecast of future electric energy use in the Pacific Northwest and of the potential for energy conservation, recently elected to adopt several conservation measures rather than purchase a share in two large new thermal power plants. ENERGIES AND UTILITIES COMMITTEE, WASHINGTON STATE HOUSE OF REPRESENTATIVES, ELECTRIC ENERGY ISSUES IN THE PACIFIC NORTH 13 (1977).

37. 1A NORTHWEST ENERGY POLICY PROJECT, *supra* note 31, at xiii.

38. *Id.*

39. *Id.* at xiii-xv.

II. THE ROLE OF THE FEDERAL GOVERNMENT IN ENERGY CONSERVATION

If energy conservation is to have a significant impact, coordinated efforts at all levels of the government and private sector will be required. It is the responsibility of the federal government to establish a framework. Although some energy conserving behavior may occur voluntarily if the government merely educates the public, governmental action is critical in order to overcome the market constraints that currently deter effective energy conservation.⁴⁰ Tax incentives or changes in price structures⁴¹ may be necessary, and, in critical areas, voluntary guidelines and economic incentives may need to be replaced by mandatory measures.⁴²

The role the federal government must play is twofold. First, a national conservation policy must be established. Second, within the framework established by national policy, state conservation programs must be coordinated without substantially interfering with state energy policies. State and federal perspectives regarding energy often differ. Federal policymakers may focus on long-term considerations such as national security, foreign relations, the balance of payments, and protection of the nation's environment, while state and local governments may be concerned primarily with the welfare of the state and its citizens.⁴³ To date, federal energy conservation legislation has utilized a combined approach: national standards and programs have been adopted to achieve immediate

40. Examples of market constraints that currently exist are: (1) inadequate information for consumers; (2) loan financing difficulty; (3) energy prices that do not reflect the relative costs of new energy supply and conservation; (4) "spillover costs" whereby those who would have to pay for conservation do not obtain full energy cost reduction; and (5) public attitudes that do not reflect understanding of the long term energy situation. CALIFORNIA ENERGY TRENDS, *supra* note 18, at 7.

41. *Id.* For example, energy prices may not reflect the relative costs of new energy supplies, or spillover costs may prevent those who would pay for conservation measures from obtaining the full energy cost reduction.

42. Federal and state power to regulate in the area of energy conservation is overlapping. To the extent the federal government mandates certain measures (particularly in an area of exclusive federal responsibility such as interstate commerce), the states may be preempted. See generally Engdahl, *Preemptive Capability of Federal Power*, 45 U. COLO. L. REV. 51 (1973). In other areas, such as zoning, a state may utilize its police power, U.S. CONST. amend. X, to enact energy legislation. See Mills & Woodson, *Energy Policy: A Test for Federalism*, 15 ARIZ. L. REV. 405, 406 (1976). Cooperative federalism—harmonizing state and federal legislation—is another method for allocating federal and state power. See note 88 & accompanying text *infra*.

43. Mills & Woodson, *supra* note 42, at 405. For example, states may impose stricter air and water pollution standards, because of their particular geographic and economic situation, than the federal government.

energy savings in some areas, while state planning and implementation has been encouraged in other areas.⁴⁴

Two complimentary pieces of legislation, the Energy Conservation and Production Act (ECPA)⁴⁵ and the Energy Policy and Conservation Act (EPCA),⁴⁶ represent the most important existing federal legislation on energy conservation. Prior to their enactment, energy conservation legislation on the national level primarily was concerned with the allocation of petroleum and petroleum products.⁴⁷ Each statute covers a wide range of energy conservation activities and, with a few notable exceptions,⁴⁸ is based on voluntary compliance through economic incentives or public education. Throughout this analysis of federal energy conservation efforts, special emphasis will be given to the unique contribution the federal government can make, vis-à-vis the states, in promoting nationwide energy conservation.

In order to achieve the maximum amount of voluntary energy conservation, the federal government has undertaken an extensive campaign to inform the public of the need to conserve energy.⁴⁹ Public education through advertisements, seminars, and government publications on a national level is necessary both to inform Americans of the seriousness of the energy crisis and to assure members of one community that the burdens of conservation will be borne equally by all citizens. The EPCA also requires energy usage information on a wide variety of consumer products,⁵⁰ thus seeking to encourage consumers to purchase more fuel-

44. For a discussion of the states' role in energy conservation, see notes 113-45 & accompanying text *infra*.

45. Note 15, *supra*.

46. *Id.*

47. See, e.g., Federal Energy Administration Act of 1974, 15 U.S.C. §§ 761-790h (1976); Emergency Petroleum Allocation Act of 1975, 15 U.S.C. §§ 751-760h (1976); Energy Supply and Environmental Coordination Act of 1974, 15 U.S.C. §§ 791-798 (1976).

48. For example, Congress has imposed a mandatory 55-mile-per-hour speed limit to achieve a reduction in gasoline consumption. Emergency Highway Energy Conservation Act, 23 U.S.C. § 154 (1976); see Thoms, *Transportation Legislation and Fuel Shortages*, 51 N.D. L. REV. 771 (1975).

49. This campaign has taken the form of advertisements in the media, seminars and speeches to civic groups by government personnel, and issuance of publications. See EPCA, 42 U.S.C. § 6361(b) (1976); see, e.g., OFFICE OF CONSERVATION AND ENVIRONMENT, FEDERAL ENERGY ADMINISTRATION, LIGHTING AND THERMAL OPERATIONS: ENERGY MANAGEMENT PROGRAM FOR COMMERCIAL PUBLIC INDUSTRIAL BUILDINGS (1976). Federal officials are also available to provide follow-up advice as to the implementation of conservation measures. The efforts are under the direction of the Assistant Secretary for Conservation and Solar Applications of the Department of Energy (DOE). DEPARTMENT OF ENERGY, FACT BOOK 17-18 (1977) [hereinafter cited as DOE FACT BOOK].

50. 42 U.S.C. § 6294 (1976). The products covered in this provision are refrigerators, freezers, dishwashers, clothes dryers, water heaters, room air conditioners, home heating equipment (not including furnaces), television sets, kitchen ranges and ovens, clothes washers, humidifiers, de-

efficient products.⁵¹ Moreover, the federal government has sought to encourage voluntary conservation by setting an example. To this end, the federal government has dimmed lights in office buildings, lowered room temperatures during the winter, reduced air-conditioning during the summer, and encouraged federal workers to use carpools or public transportation.⁵²

Congress also hopes to achieve voluntary energy conservation in the industrial sector. Under the EPCA, the Department of Energy (DOE) is authorized to develop voluntary targets for fuel-intensive industries,⁵³ and these industries are required to report whether progress is being made toward these voluntary targets.⁵⁴ Although this program subjects fuel-intensive industries to public scrutiny, the voluntary nature of this program considerably weakens its impact.⁵⁵

A sound energy conservation policy must seek to reduce the amount of energy consumed in transportation.⁵⁶ Current federal programs encourage the use of carpools, mass transportation⁵⁷ and fuel-efficient automobiles. The Energy Supply and Environmental Coordination Act of 1974⁵⁸ requires the Secretary of Transportation to prepare an Emergency

humidifiers, central air conditioners, furnaces, and any other consumer product as classified by the Federal Trade Commission. *Id.*

An earlier bill had attempted to impose a mandatory 25% fuel economy improvement in these appliances by 1985. Several Congressmen suggested that such a provision would put an undue burden on small manufacturers, reduce competition, and eventually reduce consumer choices. *See generally* H.R. REP. NO. 94-340, 94th Cong., 1st Sess. 306, *reprinted in* [1975] U.S. CODE CONG. & AD. NEWS 1762, 1944.

51. The National Bureau of Standards is charged with developing energy efficiency improvement targets for consumer goods covered by EPCA. 42 U.S.C. § 6295 (1976). Many states also have implemented similar labeling initiatives. Notes 113-45 & accompanying text *infra*.

52. Conversation with Myron S. Kaufman, Senior Attorney, Office of Administrative Review, U.S. Department of Energy, in Washington, D.C. (Jan. 27, 1978). *See also* 42 U.S.C. § 6361 (1977); 34 C.F.R. § 232.8 (1977) (General Services Administration regulation on government employee parking).

53. The EPCA requires the Administrator of the Federal Energy Administration (FEA), now the DOE, *see* note 84, to identify the major energy-consuming industries in the United States. Energy efficiency improvement targets are to be set for the 10 most energy consumptive industries. 42 U.S.C. § 6344(a) (1976).

54. *Id.* § 6345.

Thirty-seven percent of the nation's energy is consumed by industry. NATIONAL ENERGY PLAN, *supra* note 1, at 43. Although the National Energy Plan notes that industry has done better than other sectors in conserving energy, lack of federal legislation in other areas tends to deter conservation. For example, since industries often receive volume discounts on energy, the initial costs of energy-saving investments often exceed the cost of actual energy savings.

55. *See* Mills & Woodson, *supra* note 42, at 440.

56. *Id.*

57. Public transportation has been found to be two to four times more efficient than the automobile. Mills & Woodson, *supra* note 43, at 442. *See generally* PROJECT INDEPENDENCE REPORT, *supra* note 4.

58. 15 U.S.C. § 791-796 (1976).

Mass Transportation Assistance Plan.⁵⁹ Additionally, the Urban Mass Transportation Authority,⁶⁰ part of the Department of Transportation, administers federal assistance for mass transit.⁶¹ Congress has also adopted some mandatory conservation measures concerning transportation. A mandatory nationwide 55-miles-per-hour speed limit to conserve petroleum was instituted,⁶² and fuel economy standards for automobiles were mandated by the EPCA in 1975.⁶³

Although building standards traditionally have been subject to state authority, federal activity in this area is increasing.⁶⁴ In 1977, almost twenty percent of the United States' energy was used to heat and cool buildings, and as much as half of that energy was wasted.⁶⁵ The potential energy savings from improving energy efficiency in the nation's buildings is enormous. The ECPA⁶⁶ authorizes the development of federal energy conservation performance standards for new residential and commercial buildings.⁶⁷ It contains a two billion dollar loan guarantee program to encourage energy conservation investments in public and commercial buildings.⁶⁸ To encourage homeowners to make conservation-related home improvements, the ECPA establishes a conser-

59. *Id.* § 794.

60. Urban Mass Transportation Act of 1964, 49 U.S.C. §§ 1601-i613 (1976).

61. *Id.* § 1604.

62. Emergency Highway Conservation Act, 23 U.S.C. § 154(a) (1976); see Thoms, *supra* note 48, at 771.

63. EPCA, 15 U.S.C. § 2002(d) (1976). Automobile manufacturers must increase average fuel economy for automobiles gradually from 18 miles per gallon in 1978 to 27.5 miles per gallon in 1985. *Id.* § 2002(a)(1). Manufacturers, however, may apply to the Secretary of Transportation for a reduction in applicable fuel economy standards. *Id.* 15 U.S.C. § 2002(d).

Title III of the EPCA preempts state action that conflicts with the federal automobile fuel economy standards. 15 U.S.C. § 2009 (1976).

64. Mills & Woodson, *supra* note 42, at 446. Proposals for a nationwide building code and for a federal land use bill illustrate the potential for federal activity.

65. NATIONAL ENERGY PLAN, *supra* note 1, at 40-41.

66. Note 15 *supra*.

67. ECPA, 42 U.S.C. § 6833 (1976). Federal standards do not affect state and local governments directly, but do extend to recipients of federal assistance. For example, owners of residential renting units usually obtain funding for deferred maintenance and repairs by refinancing approximately every 10 years. G. STERNLIEB, *THE URBAN HOUSING DILEMMA: THE DYNAMICS OF NEW YORK CITY'S CONTROLLED HOUSING* 48, 581-648 (1976). See also Mill & Woodson, *supra* note 42, at 439. Funding for such work is available from the Department of Housing and Urban Development. Housing Act of 1974, 12 U.S.C. § 1715(z)(1) (1976).

Although Congress might enact a uniform national building code if national uniformity was deemed essential to prevent inconsistent local laws from interfering with interstate commerce, courts might view such a code as unwarranted interference with the states' police power. Mill & Woodson, *supra* note 42, at 439.

68. ECPA, 42 U.S.C. § 6864 (1976).

vation demonstration program.⁶⁹ Reliable information regarding the costs, savings, and benefits of improvements that conserve energy is to be provided through programs at the state level.⁷⁰ Low-income homeowners have had difficulty coping with utility rates, which have escalated since the onset of the energy crisis; the ECPA provides for \$200,000 in grants to permit certain low-income persons to weatherize existing homes.⁷¹

Utility retail rates traditionally have been regulated by the states.⁷² The primary consideration in establishing rates has been to strike a balance between ensuring a fair rate of return on utility investments and providing reliable service at a reasonable price.⁷³ In order to take full advantage of the economies of scale, declining block rates are used.⁷⁴ The result, in most cases, is an economic disincentive to conserve since those who consume more energy get a commensurate discount.⁷⁵ The ECPA authorizes the DOE to develop and fund proposals to improve utility rate design,⁷⁶ on the assumption that new rate structures would decrease energy use.⁷⁷ The proposals are to consider: (1) load management techniques;⁷⁸ (2) rates that reflect marginal cost of service or time of use

69. *Id.*

70. *Id.*

71. *Id.* §§ 6861-6872.

72. Mill & Woodson, *supra* note 42, at 450.

73. *Id.*

74. NATIONAL ENERGY PLAN, *supra* note 1, at 46. Those who use small quantities of energy often pay the highest prices because of practices such as declining block rates. Such rates do not reflect the hidden costs of energy usage. *Id.*

75. *Id.*

76. 42 U.S.C. §§ 6801-6807 (1976).

77. Congress stated that "improvement in electric utility rate design has great potential for reducing the cost of electric utility service . . . and for encouraging energy conservation." *Id.* 42 U.S.C. § 6801 (1976). The extent to which utility rates can affect the demand for electricity is subject to considerable disagreement. There seems to be no consensus as to what extent the demand for electricity is elastic, *i.e.*, as electricity becomes more expensive will usage decrease proportionately, or is there a certain amount of electricity usage that will not be affected by any significant price changes?

Compare, Applicants' Direct Testimony with Respect to Energy Peak Load Forecasts and Generating Capability Requirements; in *Matter of Public Service Company of New Hampshire*, 11106, 11152 (1977) (Seabrook Action, Units 1 and 2) (Nuclear Regulatory Commission Docket 50-443-444), with the studies cited in Memorandum in Support of Petition of Sierra Club and Prince George's Environmental Coalition for the Promulgation of a Rule Requiring Each Applicant for a Permit to Construct and Operate a Nuclear Power Reactor for Commercial Generation to Submit a Price Elasticity of Demand Study for the Service Area to be Affected by the Licensed Activity 21 (1974) (filed with the U.S. Atomic Energy Commission, May 17, 1974).

78. Load management is an attempt to influence the level of demand for electrical energy so that demand conforms to current supply situations and long-run objectives and restraints. *The Role of the Bonneville Power Administration in the Pacific Northwest Power Supply System*, THE REGIONAL ELECTRIC POWER SUPPLY SYSTEM 12 (1977). Effective load management may reduce consumption of electricity during periods of peak demand and save some of the oil and gas currently being used by these peaking units. NATIONAL ENERGY PLAN, *supra* note 1, at 46.

service, or both; (3) ratemaking policies that discourage inefficient use of fuel and encourage economical purchases of fuel; and (4) rates, or other regulatory policies, that encourage electric utility system reliability.⁷⁹ The DOE is authorized to intervene in state rate proceedings before public utility commissions to present its view on the effect of a proposed rate schedule upon national energy conservation goals.⁸⁰ It may not intervene in such proceedings on its own motion, however, but only upon the request of a state, a utility regulatory commission, or another participant in the proceeding.⁸¹

As the preceding discussion demonstrates, existing federal energy conservation efforts, to a large degree, lack coherency. This "piecemeal" approach with its emphasis on voluntary compliance must be replaced by a comprehensive energy conservation program that produces substantial energy-saving behavior.⁸²

Without strong federal leadership, significant changes in the nation's energy use patterns will not occur. The first step toward this goal has been taken. Although a comprehensive national energy policy has not been adopted as of this writing,⁸³ a National Energy Information System

79. ECPA, 42 U.S.C. § 6803 (1976).

80. *Id.* § 6804(b).

81. *Id.*

82. See notes 146-56 & accompanying text *infra*.

83. President Carter proposed the nation's first comprehensive energy plan in 1977. See note 1 *supra*. Implementing legislation was introduced in Congress where it has undergone substantial revision. See HOUSE AD HOC COMM. ON ENERGY, REPORT ON H.R. 8444, H.R. REP. NO. 543, 95th Cong., 1st Sess. (1977) (legislation as initially presented to Congress); 41 CONG. Q. 2119, 2119-22 (1977).

The National Energy Plan recognizes the dimensions of the energy crisis and the necessity for governmental response. NATIONAL ENERGY PLAN, *supra* note 1, at IX, XIV, 9-23. It seeks to reconcile potentially conflicting goals of decreased energy consumption, economic growth, and environmental protection. *Id.* at IX, 26-27. The Plan asserts that "[e]nergy conservation, properly implemented, is fully compatible with economic growth, the development of new industries, and the creation of new jobs for American workers." *Id.* at 47.

The Plan is designed to decrease American dependence on imported fuel, prepare the United States for increased oil scarcity and higher oil prices, and achieve substantial energy savings through conservation and increased fuel efficiency. *Id.* at XIV. The goals are to:

- reduce the annual growth of total energy demand to below 2 percent;
- reduce gasoline consumption 10 percent below its current level;
- reduce oil imports from a potential level of 16 million barrels per day to 6 million, roughly one-eighth of total energy consumption;
- establish a Strategic Petroleum Reserve of 1 billion barrels;
- increase coal production by two-thirds, to more than 1 billion tons per year;
- bring 90 percent of existing American homes and all new buildings up to minimum energy efficiency standards; and
- use solar energy in more than 2-1/2 million homes.

Id. at XIII.

To achieve these goals the Plan relies on conservation and fuel efficiency. *Id.* at X, 35-47. Petroleum use would be decreased by a tax on "gas guzzling" automobiles (a graduated excise tax on

has been established.⁸⁴ Successful planning requires an accurate assessment of the nation's energy resources, energy utilization patterns and growth trends, and the potential energy savings of various conservation measures, both voluntary and mandatory. The National Energy Information System attempts to accomplish this goal.⁸⁵ Accuracy in energy forecast is essential,⁸⁶ not only in the formulation of conservation policy, but also to enable administrators to know what margin for flexibility exists in policy implementation. As recently stated by a member of the House of Representatives:

new automobiles with fuel efficiency levels of less than 20 miles per gallon in 1980 and 27.5 miles per gallon in 1985), *id.* at 36, a series of crude oil equalization taxes that would bring the net price of domestic crude oil up to the prevailing world price by 1980, *id.* at 50-52, and a standby gasoline tax to be imposed if gasoline consumption exceeds a predetermined target consumption, *id.* at 38-39. The Plan also encourages insulation and solar heating and cooling through a series of tax credits, grants, and loans, *id.* at 40-41, and includes mandatory energy standards for home appliances, *id.* at 43, heat recapture proposals for the generation of electricity, *id.* at 45, and revisions of the price structure for electric and gas utilities, *id.* at 46-47.

84. The National Energy Information System was established by the Federal Energy Administration Act Amendments of 1976, 15 U.S.C. §§ 790-790h (1976). This office originally was established to separate the functions of energy data collection and analysis from those of policymaking. *See* S. CONF. REP. NO. 94-119, 94th Cong., 2d Sess. 53, *reprinted in* [1976] U.S. CODE CONG. & AD. NEWS 2005, 2009. As the Energy Information Administration within the DOE, however, this unit will be responsible for complex, long-term analyses of energy trends and will focus on the economic impact of these trends or regional and industrial sectors. The Administration also will develop two new systems: a national reserves system to determine the best estimates of fuel reserves and a financial reporting system for the energy producers. DOE FACT BOOK, *supra* note 49, at 33.

Congress first directed study of the potential of various methods of energy conservation in the Energy Supply and Environmental Coordination Act of 1974, 15 U.S.C. § 796 (1976), which included:

- (1) The energy conservation potential of restricting exports of fuels or energy-intensive products or goods, including an analysis of balance-of-payments and foreign relations implications of any such restrictions;
- (2) Alternative requirements, incentives, or disincentives for increasing industrial recycling and resource recovery in order to reduce energy demand, including the economic costs and fuel consumption trade-off which may be associated with such recycling and resource recovery in lieu of transportation and use of virgin materials; and
- (3) Means for incentives or disincentives to increase industrial efficiency.

Id.

85. *See* note 84 & accompanying text *supra*; Butler, *Federal Energy Programs and Policy*, 32 BUS. L. REV. 633, 635-38 (1977).

86. As mandated by Congress, the National Energy Information System must contain information sufficient to define and permit an analysis of: (1) the institutional structure of the energy supply and demand system; (2) the consumption of fuel by various classes, sectors, and regions; (3) the sensitivity of energy production and usage to economic factors, environmental constraints, technological improvements, and suitability of alternate energy sources; (4) the impacts of exchanges in energy supply and consumption on industry, labor, and geographic regions; and (5) the international aspects of United States energy supply and consumption. Federal Energy Administration Act Amendments of 1976, 15 U.S.C. § 790(a)-(b) (1976).

Any energy policy must be based upon the best scientific and engineering facts available. We simply cannot afford the luxury of basing policies on fantasies . . . prejudices . . . fears . . . or hopes.⁸⁷

Accurate energy information is vital to the development of a rational energy conservation policy and the federal government can play a key role in providing the necessary resources for a coordinated national effort.

III. THE ROLE OF THE STATES IN ENERGY CONSERVATION

State energy conservation programs are vital to the success of a nationwide conservation effort.⁸⁸ Active participation by state and local authorities, both through federally subsidized programs and independent state action, has already begun.⁸⁹ By examining some of the more innovative state energy conservation programs, insight can be gained as to the proper role federal and state authorities should play in the formulation and implementation of energy conservation policies.

A. Federally Supported State Energy Conservation Efforts

The EPCA⁹⁰ and the ECPA⁹¹ set up a framework for state energy conservation programs to complement the federal programs. It was found that states were in a unique position to effect the rate of growth of energy demand through state laws, policies, programs, and procedures designed to conserve energy.⁹² Moreover, states were considered to be more ca-

87. ENERGY TECHNOLOGY II, *supra* note 18, at 2 (statement of Rep. Mike McCormack, D., Wash.).

88. State energy legislation is based on the police power that is recognized implicitly in the tenth amendment to the Constitution. U.S. CONST. amend. X. Few judicial limitations have been placed on this power, and a legislative declaration that a statute promotes the general welfare is considered a legitimate exercise of state power. *See* Perry Trading Co. v. Ervin, 46 So.2d 458 (Fla. 1950); M. FORKOSCH, CONSTITUTIONAL LAW 266 (1st ed. 1963).

If it were not for the preemptive effect of federal actions, the state police power would provide ample authority for most energy-related regulation. The primary questions, therefore, revolve around the scope of federal rather than state power; where federal power does not preclude state action, state power generally exists. Mills & Woodson, *supra* note 42, at 415.

89. Many states have established energy agencies. Fifty-five jurisdictions are participating in a federally created state conservation program, *see* notes 113-45 & accompanying text *infra*, including all of the fifty states. *See generally* ENERGY POLICY PROJECT, NATIONAL CONFERENCE OF STATE LEGISLATURES, ENERGY: THE STATES' RESPONSE—ENERGY LEGISLATION (1976) (general compilation of state legislative activity in response to energy crisis).

90. Authority for the State Energy Conservation Program was established through the enactment of the EPCA. 42 U.S.C. §§ 6321-6327 (1976).

91. The State Energy Conservation Program was amended when the ECPA was enacted in 1976. *Id.* §§ 6805, 6836-6837, 6863-6865, 6891.

92. DEPARTMENT OF ENERGY, ANNUAL REPORT TO THE PRESIDENT AND CONGRESS ON THE STATE ENERGY CONSERVATION PROGRAM I (1977) [hereinafter cited as STATE ENERGY CONSERVATION PROGRAM].

pable of developing energy conservation measures that could be tailored more precisely to particular local conditions, thus avoiding any adverse impacts that might occur from changing energy use patterns.⁹³

The State Energy Conservation Program, established by the EPCA,⁹⁴ provides a means by which a state may enter into a cooperative effort with the federal government to further that state's energy conservation efforts. Under the program, each state is free to develop its own energy conservation plan.⁹⁵ The federal government, in turn, provides technical assistance and financial support.⁹⁶

The EPCA directs the Administrator of the State Energy Conservation Program, acting in cooperation with state governors, to prescribe guidelines for the development, modification, and funding of state energy conservation plans.⁹⁷ To qualify for federal funding, each state's plan must be linked directly to a state conservation goal. This goal is not mandated in the legislation; rather, each state is requested to assess the feasibility of achieving a goal of a five percent or more reduction in the rate of energy usage by 1980 and, if determined feasible, to develop a program to meet that goal.⁹⁸ The actual goal for each state is determined subsequently by the federal government in consultation with each state.⁹⁹ The state is then free to utilize any means it deems necessary to achieve the reduction goal, but must include certain provisions pertaining to energy usage in buildings and transportation.¹⁰⁰ Federal technical as-

93. *Id.*

94. 42 U.S.C. §§ 6321-6327 (1976); see notes 90-91 *supra*.

95. Although each state is free to design its own conservation program, in order to receive federal financing, state plans must include the following: (1) mandatory lighting efficiency standards for public buildings (except public buildings owned or leased by the United States); (2) programs to promote the availability and use of carpools, vanpools, and public transportation (except that no federal funds provided under this part shall be used for subsidizing fares for public transportation); (3) mandatory standards and policies relating to energy efficiency to govern the procurement practices of the state and its political subdivisions; (4) mandatory thermal efficiency standards and insulation requirements for new and renovated buildings (except buildings owned or leased by the United States); and (5) a traffic law or regulation that, to the maximum extent practicable and consistent with safety, permits the operator of a motor vehicle to turn such vehicle right at a red stop light after stopping. 42 U.S.C. § 6322(c). See also 10 C.F.R. §§ 420.1-420.42 (1977) (state energy plan guidelines).

96. STATE ENERGY CONSERVATION PROGRAM, *supra* note 92, at 2.

97. 42 U.S.C. § 6322(b) (1976). Within five months of the effective date of the guidelines, the governor of each state is invited to submit a report that includes a proposal of the state energy plan designed to result in scheduled progress toward the achievement of the state's goals and a detailed description of the estimated cost of the program's implementation and of the estimated energy savings associated with each functional category of energy conservation contained in the plan. *Id.* § 6322(b)(1)-(2). See also *Id.* § 6327.

98. STATE ENERGY CONSERVATION PROGRAM, *supra* note 92, at 2.

99. *Id.*

100. See note 98 *supra*.

sistance may be provided upon request, and financial assistance offered after a state plan has been approved by the DOE.¹⁰¹

The ECPA further develops the federal-state interface established by the EPCA. Funds of up to forty million dollars are available for the 1978-79 fiscal year to supplement state energy conservation funds provided for under the EPCA.¹⁰² In order to receive these funds, states must carry out a continuing public education effort, insure effective inter-governmental coordination, and conduct energy audits of buildings and industrial plants.¹⁰³ Additional conservation measures also may be proposed by a state and, if approved by the DOE, may be implemented with federal financial assistance.¹⁰⁴

The state energy conservation plans provided under the EPCA and the supplemental energy plans of the ECPA are valuable tools with which to formulate national energy policy. The system of federal standards combined with state implementation techniques¹⁰⁵ permits the uniform implementation of national policy, yet minimizes federal-state friction.¹⁰⁶

101. Originally under the auspices of the Federal Energy Administration, the state programs are regulated now by the DOE. See note 84 & accompanying text *supra*.

The Administrator of the FEA is charged with prescribing guidelines for the development of supplemental state energy conservation plans and rules governing federal funding for such plans and to grant federal financial assistance for the implementation of state plans that include:

- (1) procedures for carrying out a continuing public education effort to increase significantly public awareness of energy savings and available conservation measures;
- (2) coordination among state, local, and federal energy conservation programs;
- (3) energy audits with respect to buildings and industrial plants; and
- (4) other guidelines developed by the Administrator, which may include: (a) the formation of a state energy conservation advisory committee, (b) a program to prevent unfair or deceptive acts or practices related to energy conservation, (c) verification of the purchase and installation of energy conservation measures, and (d) assistance to cooperative action to implement energy conservation measures and renewable resource energy measures.

102. See STATE ENERGY CONSERVATION PROGRAM, *supra* note 92, at 71-77.

103. ECPA, 42 U.S.C. § 6834(a) (1976).

104. STATE ENERGY CONSERVATION PROGRAM, *supra* note 92, at 3.

105. Systems of federal standards combined with state implementation have been used successfully in a number of federal programs. See, e.g., Clean Water Act of 1977, 33 U.S.C.A. (West Supp. 1978). Technology forcing requirements mandate application of the best available technology economically achievable to accomplish legislative goals.

106. This system may promote cooperative federalism. Cooperative federalism regards the states and the national government as "mutually complementary parts of a single governmental mechanism all of whose powers are intended to realize the current purposes of government according to their applicability to the problem in hand." CONGRESSIONAL REFERENCE SERVICE, LIBRARY OF CONGRESS, THE CONSTITUTION OF THE UNITED STATES OF AMERICA—ANALYSIS AND INTERPRETATION xx (1973) (introduction to the 1953 edition by Professor Edward S. Corwin). According to Corwin, however, cooperative federalism invites the further aggrandizement of national power. *Id.* at xx; see Madden, *Future Directions for Federal Assistance Programs: Lessons From Block Grants and Revenue Sharing*, 36 FED. B.J. 107, 117-20 (1977) (trend in federal grants-in-aid has been towards ever-increasing federal control); Note, *The Clean Air Act Amendments of 1970: A Threat to Federalism?*, 76 COLUM. L. REV. 990, 993, 996 (1976).

The system's administrative costs are significantly less than would be required by a large-scale program implemented solely by a federal bureaucracy.¹⁰⁷ Most significantly, the system recognizes that energy conservation goals may be impossible to achieve without the cooperation of state and local authorities. This is especially important because the focal points of energy conservation involve essentially local concerns such as transportation planning and land use.¹⁰⁸

107. Even an ambitious national program may operate with a small national staff if state implementation is utilized. For example, a relatively small federal bureaucracy of 2143 full-time employees, working with an allocated budget of \$59,973,000, implemented federal air and water pollution strategies during fiscal year 1976. Stewart, *Pyramids of Sacrifice? Problems of Federalism in Mandating State Implementation of National Environmental Policy*, 86 YALE L.J. 1196, 1200 n.26 (1977). During the same year, the Environmental Protection Agency (EPA) made grants totaling \$137 million to the states to control pollution. *Id.*

The system established by the ECPA and the EPCA also circumvents the political obstacles inherent in operating a national program. *See id.* at 1200-01.

108. *But see id.* at 1196. One commentator asserts that dependence on state and local government jeopardizes the success of federal environmental programs. State agencies may be responsive to local opposition to nationally imposed requirements and have little incentive to assume the administrative and political burdens of carrying out federally dictated policies. *Id.* at 1202. For example, because of pressure from local interest groups, many states undermined the effectiveness of the Environmental Protection Act by failing to adopt pollution controls in motor vehicles that were adequate under federal ambient air standards. *Id.* at 1203-04. *See also* Bullwinkel, *Environmental Law—The Uneasy Accommodation Between State and Federal Agencies*, 25 DEPAUL L. REV. 423, 427-39 (1976) (approval of a state implementation plan does not ensure achievement of federally mandated air quality standards, and significant alterations in the Clean Air Act are necessary).

In addition, the success of a system of federal standards dependent on local implementation rests on the willingness of state officials to enforce federal energy regulations. *See* Stewart, *supra* note 107, at 1204.

The statutory and constitutional basis of a scheme that requires states to implement national regulations has been called into question. In connection with federal environmental programs, four federal courts of appeals have questioned federal authority to coerce state officials to carry out federal programs. *Maryland v. EPA*, 530 F.2d 215 (4th Cir. 1975), *vacated and remanded per curiam sub nom. EPA v. Brown*, 431 U.S. 99 (1977); *District of Columbia v. Train*, 521 F.2d 971 (D.C. Cir. 1975), *vacated and remanded per curiam sub nom. EPA v. Brown*, 431 U.S. 99 (1977); *Arizona v. EPA*, 521 F.2d 825 (9th Cir. 1975), *vacated and remanded as moot per curiam sub nom. EPA v. Brown*, 431 U.S. 99 (1977). *But see* *Pennsylvania v. EPA*, v. 500 F.2d 246 (3d Cir. 1974) (EPA's statutory authority to compel state implementation of federal requirements is constitutional). Although the Supreme Court did not address the substantive issue in the *EPA* cases, doubt as to the constitutional authority of the federal government to require state implementation of federal programs was augmented by the Court's holding in *National League of Cities v. Usery*, 426 U.S. 833 (1976). In *National League of Cities*, the Court held that federal minimum wage and maximum hour requirements for employees of state and local governments contravened the tenth amendment. For a discussion of the *EPA* cases and an assessment of the impact of *National League of Cities* on federal regulation of state conduct, see Madden, *supra* note 106, at 990. At least for the present, it appears that the federal government may disapprove a state plan that is inconsistent with congressionally enacted national policy and may unilaterally promulgate a federal implementation plan, but may not require affirmative action by a state to enforce federal regulations. *Sierra Club v. EPA*, 540 F.2d 1114, 1140 (D.C. Cir. 1976) (EPA may disapprove state implementation plans insofar as they fail to prevent significant deterioration and may promulgate plan not requiring affirmative state action); Bullwinkel, *supra* note 108, at 430.

The most significant obstacle to the effectiveness of state energy conservation programs is the insufficient amount of funding authorized by Congress.¹⁰⁹ Fifty million dollars is authorized annually for the fiscal years 1976-78 under the EPCA,¹¹⁰ and forty million dollars per year is allocated for the fiscal years 1977-79 under the ECPA.¹¹¹ This amounts to less than two million dollars per year for each state if all fifty states participate equally. This low level of funding suggests that state programs are treated as merely experimental and demonstrates that the federal government does not appreciate fully the tremendous impact an aggressive energy conservation effort can have on the current energy shortage. There is a critical need to develop an effective energy conservation program on a high level, and it can be expected that greater funding now will yield concrete returns in the near future.¹¹²

B. Innovative State Energy Conservation Efforts

States have been searching for effective energy conservation strategies since the Arab oil embargo of 1973.¹¹³ By re-examining the ways in which energy has been used in the past, the states are attempting to identify ways in which their actions can have the greatest impact on future patterns of energy use. State energy conservation policies are many and varied, ranging from volunteerism and a public awareness to mandatory measures and the imposition of penalties for excessive energy use.¹¹⁴ The state energy conservation programs that will be discussed are innovative and creative. They demonstrate the potential impact aggressive state energy conservation strategies can have on the rate of growth of energy demand.¹¹⁵

A number of states have instituted programs to reduce the rate of energy use in the residential sector.¹¹⁶ Oregon is one of the most ag-

109. The inability of states to effectuate measures mandated by the EPCA is discussed in note 108, *supra*.

110. 42 U.S.C. § 6325 (1976).

111. *Id.* § 6328.

112. Expenditures for research and development for energy conservation are also disproportionately small. For fiscal year 1977, Congress authorized \$1,175,671,000 for nonnuclear energy research and development. Authorizations, Appropriations Act-Energy Research and Development Administration, Pub. L. No. 95-39, 91 Stat. 180 (1977). Only \$170 million of this amount was allocated to research and development. *Id.*

113. *See, e.g.,* ENERGY POLICY PROJECT, NATIONAL CONFERENCE OF STATE LEGISLATURES, ENERGY: THE STATES' RESPONSE IN 1976 (1977).

114. *Id.* at 1, 12. Many states have established energy agencies and developed energy programs. In all, 325 separate energy measures were passed by state legislatures in 1975, and another 280 in 1976, 60 of which dealt specifically with energy conservation. *Id.*

115. *See generally* STATE ENERGY CONSERVATION PROGRAM, *supra* note 92, *passim*.

116. This analysis is not intended to be a comprehensive exploration of all relevant state conservation legislation and programs. Rather, it provides examples of different kinds of strategies states have

gressive states in this regard.¹¹⁷ In 1974, Oregon enacted a residential building code to conserve energy. The code requires that all new single family dwellings and apartment buildings have specific energy conserving features including weatherstripping and minimum insulation levels.¹¹⁸ In 1977, a package of eleven bills was passed by the Oregon legislature dealing with residential energy use. The legislative package included five statutes relating to weatherization,¹¹⁹ two involving alternative energy devices,¹²⁰ three providing technical assistance to homeowners,¹²¹ and one granting a fifty dollar refund to the elderly to offset the costs of electricity and heating fuel.¹²² Particularly innovative is the Oregon legislation encouraging alternative energy use in homes. A tax credit is authorized for residential homeowners who utilize devices fueled by alternative energy sources, and a property tax exemption is authorized if solar devices are used.¹²³ Other measures for encouraging residential energy conservation in Oregon include a ban on master metering in new multi-unit dwellings¹²⁴ and a requirement that all new gas ranges, dryers, swimming pool heaters, and heating equipment be equipped with electric ignition devices in place of pilot lights by 1979.¹²⁵

utilized to conserve energy, taking into account their own particular socio-economic, geographic, and demographic characteristics.

117. See OREGON'S DEPARTMENT OF ENERGY, OREGON'S ENERGY FUTURE (1978). For residential energy use alone, these programs are expected to reduce annual energy expenditures by Oregon consumers by as much as \$100 million by 1997. *Id.* at 9.

118. *Id.* at 12.

119. 1977 Or. Laws ch. 889, § 6a; OR. REV. STAT. §§ 310.690, 316.001-.036, 407.010-.210, 469.140 (1977).

120. OR. REV. STAT. §§ 316.001, 407.001-.009 (1977).

121. *Id.* §§ 757.050, 758.035; OR. CONST., art. III, § 4 (S.J. Res. 18).

122. OR. REV. STAT. §§ 310.690 (1977).

123. The tax credit is a personal income tax credit not to exceed \$1,000 or 25% of costs paid by the taxpayer incidental to the installation of an alternative energy device in the taxpayer's principal residence. *Id.* § 316.001. To qualify, an alternative energy device must use solar, wind, or geothermal resources and must provide no less than 10% of the total energy requirements for heating, cooling, or electrical energy. As a further incentive, the legislation extended the period of time for taxpayers claiming an ad valorem property taxation exemption for property equipped with solar heating or cooling systems to January 1, 1998.

A special loan program providing loans up to \$3,000 for financing alternative energy devices satisfying the criteria discussed earlier also was established for eligible veterans. *Id.* § 407.001-.009.

124. Each individual unit of a multifamily residential building is required to have individual electrical metering, except where a building inspector determines, pursuant to Department of Commerce regulations, that central electrical metering would facilitate an overall reduction in electrical consumption. 1977 Or. Laws ch. 546.

125. The sale of most appliances having gas pilot lights is prohibited unless the appliance is equipped with an electric ignition pilot. *Id.* ch. 630. The Federal Energy Administration moreover, reports that a 14- to 50-percent reduction in natural gas consumption by these kinds of appliances is

The states of New York and New Jersey have implemented other strategies to cope with residential energy use. For example, in these states, legislation has been enacted requiring that upon the sale of any single-family or low-density residence the seller must provide the buyer with the previous year's heating bill for that home.¹²⁶ Furthermore, the seller will be required to hire a qualified agent to inspect the building and certify existing energy conserving materials in the house, such as attic insulation and storm windows and doors.¹²⁷

States also are instituting energy conservation measures for public buildings. In Massachusetts, for example, the building code was revised to require energy saving lighting standards in public buildings.¹²⁸ In addition, the Massachusetts building code mandates other energy conserving design features, more efficient heating systems, and less stringent ventilation standards in state-owned buildings.¹²⁹ California has established, through its Department of General Services, a conservation program for state-owned buildings in the state capital.¹³⁰ This program's initial phase includes information and training seminars for building and tenant agency representatives, comprehensive energy audits, and implementation of recommended operational changes and minor capital improvements.¹³¹ In addition, California's Energy Commission will provide its assistance in procuring grants or loans to finance larger capital expenses and will explore the use of a revolving fund for investments in cost-effective energy conservation in state facilities.¹³² Two bills relating to public buildings also were passed in Oregon. One bill requires maximum lighting standards for all public buildings constructed on or after July 1, 1978 and voluntary standards for existing public buildings.¹³³ The other bill establishes voluntary energy conservation stan-

feasible by 1980. OFFICE OF ENERGY CONSERVATION AND ENVIRONMENT FEDERAL ENERGY ADMINISTRATION, THIRD QUARTERLY REPORT TO U.S. HOUSE AND SENATE COMM. ON APPROPRIATIONS 14 (1977). Arizona also will ban the sale of new residential gas appliances equipped with pilot lights within 24 months after the certification of an intermittent ignition device. Minnesota is considering similar action. ENERGY POLICY PROJECT, NATIONAL CONFERENCE OF STATE LEGISLATURES, *ENERGY: THE STATES' RESPONSE IN 1976*, at 15 (1977).

126. STATE ENERGY CONSERVATION PROGRAM, *supra* note 92, at 27.

127. *Id.*

128. MASS. GEN. LAWS ch. 23B, § 18 (1978).

129. *Id.*

130. CALIFORNIA ENERGY TRENDS, *supra* note 18, at 50.

131. *Id.*

132. *Id.* at 117.

133. 1977 Or. Laws ch. 354.

dards for the management of public buildings, with an energy reduction goal of twenty percent by 1980.¹³⁴

Commercial and industrial energy conservation measures also have been instituted by a number of states. In Michigan, for example, used oil is being re-refined into lubricating oil and is being used as feedstock in the manufacture of other petroleum products.¹³⁵ In Illinois, the government conducts energy audits for commercial buildings and industrial plants to suggest improvements that can be made in energy efficiency.¹³⁶ In addition to building audits, the California Energy Commission is considering instituting an industrial cogeneration program to encourage utility companies and industries to collaborate in installing facilities to cogenerate electricity.¹³⁷

In the area of transportation, a number of states have instituted innovative energy conservation strategies. Several states are implementing programs to encourage consumers to purchase fuel-efficient automobiles. Some states graduate annual registration fees based on fuel efficiency,¹³⁸ while others propose a state sales tax exemption for the more fuel-efficient automobiles.¹³⁹ Most states now include energy conservation driving techniques in their driver education programs,¹⁴⁰ while Minnesota, in particular, intends to incorporate a conservation section in its driver's licensing examination.¹⁴¹ Finally, as part of the federally funded programs, all participating states must institute programs to encourage fuel efficiency in truck fleets.¹⁴² These programs include increased sizes and weights for trucks, driver training programs, and promotion of drag reduction devices for large trucks.

Many states are investigating strategies to reduce energy demand during peak hours by alternating utility rate structures. Discouraging consumption during peak hours can be accomplished either by redesigning rate structures or instituting automatic controls to limit use during peak hours.¹⁴³ For example, Oregon already has implemented an energy saving plan regarding utilities.¹⁴⁴ Utility companies in Oregon must submit

134. *Id.* ch. 853. Utah has enacted a similar statute concerning energy conservation in public buildings. S. 30; 1976 Utah Laws.

135. STATE ENERGY CONSERVATION PROGRAM, *supra* note 92, at 27.

136. *Id.* at 26.

137. CALIFORNIA ENERGY TRENDS, *supra* note 18, at 13. Cogeneration is a process for utilizing waste heat through the simultaneous production of process steam and electricity.

138. STATE ENERGY CONSERVATION PROGRAM, *supra* note 92, at 28, 99-105.

139. *Id.*

140. *Id.*

141. *Id.* at 84, 101.

142. *Id.* at 28.

143. *Id.*

144. 1977 OR. Laws ch. 889, §. 6a.

energy conservation plans to the state's public utility commission for approval. The plans must include onsite energy audits at the request of the homeowner, installation of insulation upon request, arrangements for customer financing if requested, and provisions for payment of services through the customer's monthly utility bill.¹⁴⁵

The preceding examples of innovative state energy conservation programs demonstrate the variety of ways in which states are attempting to deal with the energy crisis. It is paramount that these programs be monitored closely and, if proven successful, promoted nationwide.

IV. CONCLUSION: PROSPECTS FOR THE FUTURE

If energy conservation is to be successful, it must become the cornerstone of an aggressive national energy policy. Energy conservation must be addressed comprehensively by establishing a national framework in which the conservation efforts of federal, state, and local governments can be harmonized to produce the greatest impact. The current lack of a national energy plan seriously undermines existing energy saving efforts. For example, it does little good to institute broad public awareness programs to educate Americans concerning the seriousness of the energy crisis and the need to conserve energy, if current federal pricing policies encourage overconsumption.¹⁴⁶ Similarly, aggressive state legislation that mandates energy conservation behavior is not supported by comparable federal legislation. Most of the federal energy conservation programs are based solely on voluntary compliance and encouragement.¹⁴⁷ In light of these inconsistencies, it is not surprising that many Americans continue to question whether an energy crisis, in fact, exists.¹⁴⁸

145. *Id.* A substantial number of states are enacting statewide building codes that contain energy conservation provisions. During 1977, thirty state legislatures were considering this type of legislation to comply with federal standards imposed under the EPCA, 42 U.S.C. §§ 6321-6327 (1976). Other states have established loan programs for home insulation. Colorado's state housing finance authority may give "thermal performance improvement loans" to low and moderate income families. Minnesota has a similar program, but a California program to provide loans for insulation and other conservation measures could not be implemented owing to voter rejection of the bonding authority necessary to fund it. ENERGY POLICY PROJECT, NATIONAL CONFERENCE OF STATE LEGISLATURES, *ENERGY: THE STATES' RESPONSE IN 1976*, at 14 (1977).

146. THE NATIONAL ENERGY PLAN, *supra* note 1, at xi.

147. *See* notes 48-55 *infra*.

148. President Carter reiterated the elusive character of the energy crisis calling it an "invisible crisis, which grows steadily worse." THE NATIONAL ENERGY PLAN, *supra* note 1, at iii. Certainly, in comparison to the 1974 oil embargo, energy supplies today appear more than adequate. It is exactly this rationale, however, that is at the heart of the public skepticism. The "energy crisis" to the average consumer is not dwindling supplies, but the cost incurred by the consumer to retain his pre-1974 standard of living. It is the rapidly escalating cost of energy, for example, that has triggered

On the state and federal levels, energy conservation legislation must be enacted on a much broader scale. Programs that cut across agency lines, resulting in a coordinated and unified approach that can take advantage of the skills and resources of a number of agencies, need to be instituted.¹⁴⁹ Energy conservation programs cannot be established in a vacuum. Policymakers must be able to assess the economic, social, and environmental implications of these programs if these efforts are to have a substantial impact on the rate of energy growth.¹⁵⁰ In order for states to be able to make informed decisions and effectively implement energy conservation measures, federal funding must be increased. In addition, although the desirability of specific proposals may vary depending on the differing needs of each region, all levels of government need to impose "technology forcing requirements."¹⁵¹ Such requirements, analogous to those currently part of the Clean Water Act,¹⁵² compel industries to use the best practicable technology available. As a result, state-of-the-art engineering is forced to advance to provide industries with the knowledge and equipment necessary to comply with the law.¹⁵³ Similar require-

greater legislative scrutiny over state utility commissions and public utilities and caused legislatures to enact special loan and grant programs for residential weatherization, lifeline utility rates, and special tax incentives for weatherization or installation of alternative energy devices.

149. The National Energy Extension Service Act, 42 U.S.C.A. §§ 7001-7011 (West Supp. 1977), recognizes the need to expand the federal outreach effort, but also recognizes that this effort could be achieved most efficiently by making states full participants. *Id.* § 502, 42 U.S.C.A. § 7001. Since the enactment of the National Energy Extension Service Act, a pilot program has been operating in ten states: Alabama, Connecticut, Michigan, New Mexico, Pennsylvania, Tennessee, Texas, Washington, Wisconsin, and Wyoming. The program is directed primarily at small businesses and individual consumers with special emphasis on identifying methods of conserving energy and developing alternative energy technologies. Some of the innovative subprograms established under the pilot program include car care clinics, free technical advice for new home builders, home energy audits (Alabama), onsite energy reviews in small businesses (Connecticut), energy information clearinghouses and youth energy projects in coordination with 4H programs (Michigan), special training sessions and onsite consultations with local government officials (Pennsylvania), education of bankers, lenders, building appraisers, and realtors on cost benefits of energy conservation investments (Tennessee), and energy conservation courses in high schools (Wyoming).

150. The Director of the National Energy Extension Service is required to issue nationwide program guidelines by October 1, 1978. 42 U.S.C.A. § 7005 (West Supp. 1977). The Carter administration, moreover, has proposed consolidating the state programs authorized under the EPCA, the ECPA, and the National Energy Extension Service Act. S. 3283, 95th Cong., 2d Sess. (1978) (introduced by Senator Henry Jackson on July 12, 1978 and referred to as the State Energy Management and Planning Act). Legislative action on this proposal is not expected during the sitting of the 95th Congress.

151. For a discussion of technology forcing requirements, see Browne, *Water Quality Coordination Issues Relating to Siting*, in NUCLEAR REGULATORY COMMISSION, PROCEEDINGS OF THE SECOND STATE-FEDERAL POWER PLANT SITING CONFERENCE 126 (1976).

152. See, e.g., 33 U.S.C. § 1311(b) (1976).

153. Browne, *supra* note 151, at 125-26.

ments incorporated in energy conservation legislation would necessitate improvements in the energy efficiency of our capital stock of goods and would increase the rate of energy conservation activities.

Finally, the United States must develop a conservation ethic. Americans must make what President Carter has termed an "energy transition."¹⁵⁴ Increasingly, the question, "How much do we have?" must be joined by the question, "How well are we using it?"¹⁵⁵ Although energy conservation necessitates a change in energy use behavior, it need not result in a lower standard of living. Both Sweden and West Germany enjoy a standard of living comparable to that of the United States while using less than half as much energy per capita.¹⁵⁶ The current piecemeal approach to energy conservation must be replaced by a strong comprehensive energy policy founded on aggressive energy conservation principles. Successful energy conservation today is vital to the achievement of a balanced energy economy tomorrow.

154. NATIONAL ENERGY PLAN, *supra* note 1, at 25.

155. D. HAYES, *supra* note 18, at 1.

156. NATIONAL ENERGY PLAN, *supra* note 1, at 2. For a discussion of how dramatic reductions in energy usage can be made without adversely affecting economic growth, see Ross & Williams, *supra* note 20, at 36. The authors believe that technical innovations in fuel conservation are economically feasible and can have a profound impact on energy demand for the production of goods and services. *Id.* at 30-32. This would make conservation one of the most promising means for achieving energy abundance with a negligible energy growth. *Id.* at 30, 36.

SOLAR HEATING AND COOLING: STATE AND MUNICIPAL LEGAL IMPEDIMENTS AND INCENTIVES†

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INTRODUCTION

While research and development activities to exploit solar energy for heating and cooling¹ will undoubtedly find their support levels tied to the developing Federal energy policy,² the various state laws and local ordinances and codes are likely to provide both impediments

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1. For the purposes of this paper, solar energy utilization is confined to the heating and cooling of individual residences, apartments, and commercial buildings by the ultimate consumers. The assumption has been made that there are no insurmountable technical barriers.

2. The President's National Energy Plan now before Congress contains proposed legislation which would provide for "a tax credit . . . 40 percent of the first \$1,000 and 25 percent of the next \$6,400 (for a maximum of \$2,000) paid for installation of qualifying solar equipment . . . for expenditures between April 20, 1977 and December 31, 1984 . . ." In urging the States to support the widespread utilization of solar energy, the plan points out that "a number of [States] have already amended their property tax laws to exempt solar installations from assessments. It is desirable that the other states do so as well. The States are also encouraged to enact legislation to protect access to the sun. . . . Under the proposed utility reform program, State public utility commissions would develop guidelines to prevent utilities from discriminating against users of solar energy . . ." Executive Office of the President, THE NATIONAL ENERGY PLAN: CHAPTER VII:—NONCONVENTIONAL SOURCES AND ENERGY RESEARCH 75, 76 (April 29, 1977). [See note 37, *infra*, and accompanying text.]

On August 5, 1977, the House of Representatives passed its version of the National Energy Plan, with somewhat different tax credits: 30 percent of the first \$1,500 and 20 percent of the next \$8,500 (for a maximum credit of \$1,150), for the principal resident of the claimant, usable by owners, renters and owners of co-ops and condominiums. The credit covers existing and new housing for expenditures from April 20, 1977 through December 31, 1984. Wall Street Journal August 8, 1977, at 4, col. 4. The Senate is expected to act before the end of 1977.

ments to and incentives for the use of solar end-products by consumers.

It will be useful for solar researchers, producers of solar energy devices, and legal scholars to acquaint themselves with the particular problems that arise in connection with the translation of solar designs into practice and that are related to the *acceptance* of solar energy: everything from the aesthetics of design³ through the economics of individual solar systems to the regulations or restrictions that serve either as barriers against or encouragement for the widespread use of solar energy. This paper will describe state and municipally originated impediments and incentives, and changes that might provide flexibility will be suggested. The discussion will examine access to sunlight (right to light, easements, zoning, land use planning), marketing and financing (grants and loans, tax credits), design and construction (aesthetics, building codes, material standards, performance specifications, labor laws, and union regulations) operating problems (utilities, insurance), and institutional attitudes.⁴

ACCESS TO SUNLIGHT

Every solar energy system depends on access to sunlight in order

3. *E.g.*, a designer proposing a home utilizing the latest features of energy-conscious design recently wished to use an earth berm rising in front of the south wall of the home to permit the installation of a less expensive solar heating and cooling unit than otherwise because of the insulating properties of the earth. The architectural review board of the subdivision, in an East Texas city, first rejected the idea on the grounds that "a wall is a wall, not a mound of earth, and a home should not be buried in the ground." The home owner instructed that an alternative system should be used, somewhat more expensive and less energy-efficient. Just after the foundation was poured, the review board gave its consent, too late to change back to the original system. The designer reflected that if he had visited the board in person, instead of submitting blue prints and specifications, they might have approved the original design without delay (private communication, George E. Way, Research Associate, The Energy Institute, University of Houston, July 1977).

4. The following are general references:

A readable and concise account of legal issues, concentrating on access to sunlight, legal and policy matters, regulation of building materials and design, financing and marketing arrangements, public utilities' roles, land use planning, etc., can be found in Thomas, *Legal Aspects of Solar Energy Development*, PROCEEDINGS, AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE, Annual Meeting, February 21, 1976 (Am. Bar Fdn., 1976), [hereinafter cited as Thomas].

The American Bar Foundation has also published an interim report on its project, "Legal Issues Related to the Utilization of Solar Energy," as PROCEEDINGS OF THE WORKSHOP ON SOLAR ENERGY AND THE LAW (Am. Bar Fdn., 1975). This pamphlet contains short papers by authors working in the field, as follows:

Thomas, *Access to Sunlight*, 7

Robbins, *Fiscal Impediments and Inducements*, 11

Rivkin, *Restrictions on Building Design and Materials*, 12

Robbins, *Zoning*, 15

Costonis, *Transferable Development Rights*, 19

Haar, *Innovative Land Use Laws*, 21

to operate.⁵ If the owner of land adjoining the collector constructs a building or plants a tall tree that shades the collector, no energy is captured. Even if no such obstruction currently exists, the possibility that it might arise in the future may deter investment in solar energy devices. This is probably more significant in urban areas where large numbers of homeowners occupy a relatively small land area, particularly as fossil fuel prices rise and as the relative economics of retrofitting existing homes for solar energy inspire more demand.⁶

The allocation of sunlight encompasses two main questions. What rights does the owner or user of a solar collector have to the continued use of the sun's rays that may cross the property of another before reaching his collection unit? And who will make allocations, and on what legal principles will the allocations be made?⁷

[Hereinafter cited as WORKSHOP, preceded by the name of the individual author.] The project has also issued an 85-page compendium of model solar energy laws for state and local governments focusing on eight prime issues:

- (1) improving access to insulation,
- (2) optimizing the location of solar collectors,
- (3) improving the public economics of solar systems,
- (4) improving the operation and design of systems through cooperation with public utilities,
- (5) removing potential construction and maintenance problems,
- (6) improving the financing arrangements for solar energy systems,
- (7) increasing the number of available solar energy systems, and
- (8) allocating rights to solar energy.

Model Solar Energy Laws, (Am. Bar Fdn. 1975).

Two surveys performed for the Federal Energy Administration under contract combine technical, administrative and legal considerations, and focus on incentives as well as impediments:

The Effectiveness of Solar Energy Incentives at the State and Local Level: An Overview for the Federal Energy Administration. Booz-Allen & Hamilton, Inc. (1975) [hereinafter cited as Booz-Allen].

Solar Energy Utilization in Florida, report to the Florida Energy Committee. Booz-Allen & Hamilton, Inc. (1975) [hereinafter cited as Booz-Allen Florida].

The National Conference of State Legislatures periodically surveys various aspects of state activity in energy. See Jones, *Analysis of State Solar Energy Policy Options*, Energy Policy Project, National Conference of State Legislatures (1976) [hereinafter cited as Jones].

A status report of state solar legislation, arranged by topic, is given in *Summary of State Solar Legislation 1974-1976*, Energy Report to the States, Energy Policy Project, National Conference of State Legislatures (January 17, 1977) [hereinafter cited as NCSL Summary].

The most recent report on barriers to the spread of solar heating and cooling is a result of a project sponsored by the Division of Solar Energy of the Energy Research and Development Administration, a full review of the literature in the field. *Legal Barriers to Solar Heating and Cooling of Buildings*, Environmental Law Institute (March 1977) [hereinafter cited as Legal Barriers]. This project also produced a case study in which the state of Colorado was utilized to study legal and other issues, published as Hillhouse, *Solar Energy and Land Use in Colorado: Legal, Institutional and Policy Perspectives*. Environmental Law Institute (April 1976) [hereinafter cited as Hillhouse].

5. See generally Eisenstadt and Utton, *Solar Rights and their Effect on Solar Heating and Cooling*, 16 NAT. RES. J. 363 (1976) [hereinafter cited as Eisenstadt and Utton].

6. Hillhouse, *supra* note 4, at 36.

7. White, *The Allocation of Sunlight: Solar Rights and the Prior Appropriation Doctrine*, 47 U. COLO. L. REV. 421 (1976).

The decisions could be made judicially, or federal, state and/or local statutes could be involved. From a constitutional point of view, it is likely that Congress will have to settle the problem as to which of the above institutions will be responsible. To this date, the matter has not been settled in the courts.⁸

Ancient Lights Doctrine. The ancestral common law principle, the doctrine of ancient lights, is still in effect in a modified form in England and some other parts of the English-speaking world. The doctrine establishes that uninterrupted use of light and air through a window for 20 years prevents an adjoining landowner from blocking access, thus granting a prescriptive easement by possession.⁹

The Law in the United States. At first the doctrine of ancient lights was upheld in the United States but was rejected repeatedly beginning in New York in 1838.¹⁰ Its most recent rejection of note was the case in the late 1950's involving the Eden Roc Hotel, a resort hotel on the ocean in Miami Beach, Florida. The neighboring Fountainebleau had begun construction of a building addition that would, when completed, shadow the swimming pool of the Eden Roc after two o'clock in the afternoon in the winter. The appeals court in Florida held that "ancient lights" had been unanimously repudiated in the United States but that "if public policy demands that a landowner in the Miami Beach area refrain . . ." from encroaching on another's sunlight, "an amendment of (the city's) comprehensive planning and zoning ordinance, applicable to the public as a whole, is the means by which such purpose should be achieved."¹¹

Under this case the owner of a solar energy system seeking judicial relief from shading of his collector caused by construction or plantings on adjoining land would appear to have little chance of success.

Easements. Easements for access to light and air are available in most states and are a partial answer to the problem.¹² The holder of an easement for unobstructed light owns the right to the light coming across an adjacent piece of land. Such easements can be created for any length of time by covenant, grant, or reservation.¹³ Thus, the owner of a solar collector could guarantee his access to sunlight by obtaining an easement from his neighbor. However, an easement provides insufficient protection and incentive for solar

8. *Legal Barriers*, *supra* note 4, at 4.

9. Eisenstadt and Utton, *supra* note 5, at 366 & 67.

10. *Id.*, at 367.

11. Fountainebleau Hotel Corp. v. Forty-Five Twenty-Five, Inc. 114 S.2d 357, at 360 (Fla. 1959).

12. Eisenstadt and Utton, *supra* note 5, at 368 & 69.

13. Hillhouse, *supra* note 4, at 33.

energy users, because of the possibly prohibitive cost of acquiring the rights and the requirement for prospective solar energy users to negotiate with their neighbors. A more equitable method of allocation requiring action at the community rather than the individual level is zoning.¹⁴

Zoning. Eisenstadt and Utton have commented that: "it would appear that the public policy in favor of solar heating and cooling systems is at least as strong as that for unshaded resort hotels, and that zoning ordinances should be available for the former as for the latter."¹⁵ A new concept like solar energy, whose use can only increase in the future, creates a series of problems for federal, state, and local governments. Such problems probably fall hardest on local governments whose zoning restraints, because imposed on the use of privately owned land, must be equitably designed. A solar zoning plan should recognize the following kinds of protection:

- (1) Directional orientation of street to take advantage of sunlight;
- (2) Directional orientation of slanted roofs to provide workable surfaces for solar collector retrofits;
- (3) Requirements for setting structures back from property lines to limit shadows on neighboring property; and
- (4) Control of building heights and density to minimize interference with neighborhood access to light.¹⁶

Thomas has pointed out that zoning is the "sand" of property law, not the "rock," and that people should not rely upon it to remain stable over the long run.¹⁷ Normally it requires only three readings by a local legislative body to change any zoning ordinance—sometimes drastically.¹⁸

Robbins has reasoned that "the most controversial and difficult issue was often the variance process, whereby various exceptions are made to the zoning laws depending upon circumstances."¹⁹ These circumstances often benefit one party to the detriment of another. In fact, in order to insure that local government does not punish its enemies and reward its friends the constitutional safeguards concerning zoning are continually before the courts.

14. *Id.*, at 34.

15. Eisenstadt and Utton, *supra* note 5, at 368.

16. Booz-Allen, *supra* note 4, at VII-10.

17. Thomas, *supra* note 4, at 7.

18. Note, though, that Houston, Texas is the only major city in the United States without zoning ordinances, yet has a growing reputation for excellent planning. While some are skeptical, there are those who find that the market mechanism is not materially different in result from zoning ordinances, and has a lower economic and social cost.

19. Robbins, WORKSHOP, *supra* note 4, at 16.

Until recently, zoning was thought to be within the exclusive control of local government; as national concern grows over energy use and abuse, local planning will come under the surveillance of state and federal bodies.

Ninety percent of government decisions about land use are made at the local level by officials who are familiar with the circumstances. If solar energy is to gain national prominence, much of the progress will be due to work by local government. Fiats from Washington will not have the desired political influence unless there exists a group of competent individuals at the local level.²⁰ With zoning, one can control the actual and potential use of land and the size, placement, and design of the collector.

Typical zoning systems applied to solar heating and cooling provide for allocation of rights to unobstructed airspace for users of solar energy, accompanied by an administrative procedure for alleviating undue hardships. These schemes are usually limited to areas populated by low-density, single-family dwellings to avoid the obviously undesirable (and probably illegal) result of restricting construction of new high-rise buildings for the benefit of heating or cooling existing buildings. Some proposals automatically distribute rights to existing property owners, while others attempt to create an incentive for use of solar energy through a "first in time, first in right" system. A critical element is the provision for variances, since granting one property owner the right to unobstructed airspace may mean an unjust taking of property from another without compensation.²¹

In Colorado a study made by aerial photography determined that the vast majority of rooftops in residential zones were free from shade most of the day, but serious shading existed in other areas.²² It is recommended that advance planning (supported with strong legislation to provide for new developments) would minimize costs in the future.²³

Eminent Domain. If solar zoning is not considered a permissible exercise of police powers, it may be questioned whether the local government could condemn necessary airspace and sell or lease it to solar energy users. Theoretically, this approach would allow a local government to encourage solar energy development by condemning property for small solar electric systems. The use of eminent domain

20. *Id.*, at 15.

21. Hillhouse, *supra* note 4, at 34.

22. *Id.*, at 35.

23. Robbins, WORKSHOP, *supra* note 4, at 34.

powers could be expensive, and might not contribute to rational land use planning if arbitrariness occurred.

Legally, the basic question about eminent domain is whether authority is being exercised for public benefit. Since eminent domain could be utilized for the benefit of individual property owners, it might be argued that the power is being employed for private benefit. The Supreme Court has approved eminent domain for urban renewal even though private landowners have been primarily benefitted. "Assuming similar general benefits to the public at large can be shown to accrue from the use of solar energy, a solar energy related condemnation program should also be upheld."²⁴

Other Measures. Newer procedures in land use planning have been devised and serve to protect property characteristics that favor the use of solar energy. These include comprehensive land use plans, land donation, transferable development rights, official mapping of solar districts, and planned unit development.²⁵

Comprehensive land use plans, particularly for large-scale residential developments, shopping centers, and industrial parks, would permit advance planning and integration of solar devices. Land donation can be required by developers for a park or similar municipal purpose. This system can be extended to solar energy location donations.²⁶

Density bonuses could be provided to those who use solar devices, allowing somewhat more income from a given amount of land, since the solar units would lessen the impact of the development on the environment of the whole community.²⁷

The transferable development rights involve the trading of a right available in one location, where there is a higher use for the property or airspace, for another where the development is welcome. This involves the valuation of the development rights of both pieces of property, the computation of the future value of the properties (under different conditions that are assumed to be coming about in the future), reduction of both properties to a present value, and the exchange of one for another or for money.

It is possible that rational land use will be brought about by the creation of a "land tribunal," such as those in England, where private controls such as covenants, easements, and restrictions are placed under a body that is not traditionally judicial. The tribunal could be

24. Hillhouse, *supra* note 4, at 36.

25. Thomas, WORKSHOP, *supra* note 4, at 7.

26. Robbins, WORKSHOP, *supra* note 4, at 18.

27. *Id.*, at 18, 19.

composed of appraisers, economists, businessmen, and lawyers and be given statutory responsibility to take into account land use planning considerations for the entire community when they consider whether a particular agreement serves the purpose for which it was created. This suggestion, made by Charles Haar, seems a viable way to move in the solar energy field.²⁸

FINANCING AND MARKETING

The private sector functions that provide both the most difficult barriers to overcome and the possibilities of the greatest incentives to speedy spread of solar heating and cooling technology are financing and marketing. The areas will be discussed together as follows: financial institutions, tax barriers and incentives, distribution of solar energy systems, and warranties.

Lending Institutions. Historically one of the most important impediments to or incentives for marketing of technological improvements is financing. Lending institutions have in the past favored lending to those organizations that have had experience in a field. Since solar technology is new, it will have to show that it can compete realistically with other energy sources, or that other sources will eventually lose position because they are not economical.²⁹

In their comprehensive report, Booz-Allen point out that "lending institutions will require information on:

- (1) reliability of solar systems in general as well as ratings of specific manufacturers and products;
- (2) explicit and documented information on potential cost savings of solar technologies;
- (3) experience in solar home resale values, and
- (4) viability of retrofitting solar systems for residential and commercial buildings."³⁰

Because of their newness, solar-equipped homes may seem to be "gadgets" to bankers or other lending institutions. Banks may undervalue such property for mortgage investment purposes; therefore, houses may not be sold and commercial buildings go unmarketed because their heating and cooling systems seem inadequate. Unreasonable backup systems may be required, making costs excessive.

Loans may be unavailable at current rates, and sales prices may therefore be unpredictable, thus deterring investors. These impedi-

28. Haar, WORKSHOP, *supra* note 4, at 24, 25.

29. Jones, *supra* note 4, at 4.

30. Booz-Allen, *supra* note 4, at VIII-9.

ments are not removable by simple legislation; it will require a concerted effort to change attitudes and create a nondiscriminatory financing law that will insure reasonable terms for solar heated and cooled structures.³¹

A recent study of lending institutions using intensive interviews has produced results different from past reports: lenders are concerned with "whether or not solar devices will perform as claimed, whether they are worth the costs, and whether they will have acceptable resale values—but may not be as concerned over the 'novelty' of this development as has been suggested."³²

General Financial Incentives. Financial incentives can be devised to reduce consumer resistance, expand capital available for manufacturing, and reduce risks to financial institutions.³³ A series of programs has been proposed to the Federal Energy Administration (now part of the Department of Energy):

- (1) Low-cost loan programs for consumers with easy terms, which reduce first costs at the time of solar system purchase, rather than at the end of the year as tax incentives do.³⁴
- (2) Low-cost loans to manufacturers can subsidize product costs thereby stimulating sales and reducing the financing burden of new equipment.³⁵

From the standpoint of the State agencies engaged in promoting solar heating and cooling, there are advantages in employing the incentives to manufacturers instead of consumers: they ease the problem of communication, since manufacturers are fewer in number than consumers, and the burden of communicating with the ultimate consumer is shifted to the manufacturer. The type and rate of investment expenditures by manufacturers can be influenced in the direction the state believes is most productive.

On the other hand, no product sales result from loans to manufacturers, and resources could be expended without any solar market development occurring at all; loans to consumers, however, are directly correlated with sales and stimulate marketplace "pull" rather than "manufacturing" push.³⁶

Tax Incentives. The President's National Energy Plan has pro-

31. Robbins, WORKSHOP, *supra* note 4, at 12, 13.

32. D. Barrett, P. Epstein, and C. Haar, *Financing the Solar Home*, Regional and Urban Planning Implementation, Inc. 84 (1976).

33. Booz-Allen, *supra* note 4, at V-1.

34. *Id.*, at V-2.

35. *Id.*, at V-4.

36. *Id.*, at V-5.

posed a federal tax incentive.³⁷ States are urged to do likewise.³⁸ Seventeen states have already enacted property tax incentive laws, and others are following.³⁹

A range of possible incentive mechanisms exists, which can be directed either at individuals or corporations for different tax results. Each mechanism provides its own special ways of extending market incentives. Tax laws vary widely regionally, and each local approach requires specific study and debate.⁴⁰

Four general tax channels are involved:

- (1) sales taxes or use taxes which purchasers pay on materials used in solar devices;
- (2) property assessments;
- (3) income taxes; and
- (4) depreciation rates (they may all be impediments as well as incentives).⁴¹

Sales Taxes. There must be a clear description of the solar devices to be sold, and what constitutes the benefit, if sales taxes are to be forgiven. If accomplished, sales tax exemption would be a one-time stimulation, generally under five percent of the total system price.⁴² If materials constituted half or more of the cost of installation, several percent of the installation's cost of solar units could be saved if sales and use taxes were waived.⁴³ The removal of sales taxes could give an important psychological lift to manufacturers and potential users of solar devices. This has a recent precedent in the measures taken to encourage the use of pollution control equipment.

If sales taxes are removed, however, there would be an impact on state and local governments because of the decrease in revenues. For example, if solar units replaced furnaces, there would be no sales tax income from either. On the other hand, there might be lessened expenditures for fuel extraction, transportation, and conversion and improvement in local air pollution.

There is model legislation for air and water pollution equipment exemption in Kentucky and other states. Proposed legislation needs to define what constitutes a solar collector and to determine the cost benefit resulting from the additional energy.⁴⁴

37. See *supra* note 2.

38. *Id.*

39. NCSL Summary, *supra* note 4, at 1.

40. Booz-Allen, *supra* note 4, at IV-1.

41. Robbins, WORKSHOP, *supra* note 4, at 11.

42. Booz-Allen, *supra* note 4, at IV-7.

43. Robbins, WORKSHOP, *supra* note 4, at 11.

44. *Id.*, at 11-12.

Property Taxes. In order to determine what property tax relief should properly be given for the installation of solar heating and/or cooling units, advantages, disadvantages, and cost-benefit ratios must be carefully considered. The tax advantage should reflect actual public interest in solar energy, without becoming a windfall. For example, it may be determined that a solar installation will actually raise the value of a home, and this might suggest a tax increase. Such action could deter the installation of solar devices, which are not in the same class as the addition of a bedroom. Solar devices are expensive, but have more substantial benefits for the community, for example, saving nonrenewable resources by reduced pollution from fossil fuels.

To apply property tax rebates to solar devices, several steps need to be taken:

- (1) A clear description of what the benefit is to be and what constitutes a solar device.
- (2) Tax assessors must be trained to understand the cost and value of the devices.

Losses in local taxes due to exemptions and the loss of property taxes on conventional systems must be considered. The contribution of the solar device needs analysis. Where a collector forms part of a protective roof, only those elements serving solar heating and cooling functions could be entitled to preferential treatment.⁴⁵

Corporate Income Tax. Income taxes on businesses can have a major impact, since the tax code is oriented toward the business costs of present fossil fuels, with relatively low capital investment when long-term, life cycle costs are considered. Solar costs will be heavily loaded at the outset.⁴⁶ Through incentive packages the Federal Government and the States could seriously influence the course of corporate actions. One type of tax would allow manufacturers to deduct a fixed amount or a percentage of income from the sale of solar systems.

Another incentive would be an investment tax credit to encourage investment in larger and more efficient plants. Credits for research and development expenditures should encourage more development of systems prior to marketing. Accelerated depreciation will increase the return on new investment in plant and equipment during the early years of operation.

Decisions about where to direct the incentives, to the builder, manufacturer of components, distributor, or contractor will depend

45. *Id.*, at 12.

46. *Id.*, at 12.

on the structure of industry in the state and the local taxing system.⁴⁷ Other considerations, including the system of reporting required by the Securities and Exchange Commission, accounting methods, and other regulatory systems, will require review so that solar devices are reflected fairly on balance sheets, etc.⁴⁸

Personal Income Taxes. Some thought has been given to allowing personal income tax deductions for the purchase of solar units, but in most states income tax rates are generally not high enough for a significant saving even if the full value is allowed. Because of the progressive tax structure, savings would be greater for high income tax payers than low income tax payers.⁴⁹

Depreciation Rates. The depreciation rate applicable to solar devices for individuals and businesses could greatly affect solar installation. The actual life of collectors, the repair cycle, and risk factors need to be known in order to calculate actual depreciation and the possible applicable rates to be applied by federal and state tax bodies.⁵⁰

In order for tax incentives to have an impact, significant amounts of money must be committed; on the other hand, two positive factors are present: removal of disincentives and barriers to the installation, and provision of wide publicity for solar technology, even if the cost barrier is not significantly affected. If the incentives are provided to the consumer rather than the industry, the incentives should have the greatest impact.⁵¹

Grants and Loans. In addition to indirect incentives via tax adjustments, there are several rounds of federal agency grants and loans that have distributed partial or full subsidies to home owners, developers, and owners of commercial buildings (particularly the states themselves, and owners of federal government agency buildings). HUD completed in the summer of 1977, the second round of grants, \$6.6 million for hot water units in 10,000 homes, in programs run by state agencies under HUD rules. An additional \$10 million has been given to produce solar heating or cooling in 4,000 homes and apartments, under ERDA and HUD auspices.⁵² Other agencies, including

47. Booz-Allen, *supra* note 4, at IV-9, 10. Two states, Kansas and Massachusetts, have passed laws providing for corporate income tax breaks.

48. Booz-Allen, *supra* note 4, at IV-8.

49. *Id.*, at 8. Kansas, HB 2969, 1976, and New Mexico, SB 1, 1976, provides credits of 25 percent or \$1,000, whichever is less; Idaho, HB 68, 1976, provides an income tax credit of 40 percent the first year, then a 20 percent credit each succeeding year for three years thereafter. In any one year, the deduction is not to exceed \$5,000.

50. Robbins, WORKSHOP, *supra* note 4, at 12.

51. Booz-Allen, *supra* note 4, at I-3, 4.

52. *Business Week*, May 23, 1977, p. 30, col. 1, 2 Solar Engineering, April 1977, #4, p. 5.

NASA, are installing on government-owned property in various states equipment that will be operationally utilized, but will be evaluated throughout its useful life.⁵³

Warranties as Barriers. Solar heating and cooling is likely to have hazards of its own in installation and operation, even though it may be safer than an ordinary hot water heater. Barriers to use may be raised by the cost of insuring against those hazards.

Broken glass, glare, leakage of chemicals used to store heat, or malfunctioning may be some of the problems.⁵⁴ Remedies for these problems may be expensive. Insurance may cost more, and it may be necessary for the government to develop performance standards for the units—not only in connection with construction but in order to provide marketing incentives to stimulate sales.⁵⁵ State laws and judicial rulings will have most influence here.

DESIGN AND CONSTRUCTION

Design and Aesthetics. However efficient and nondepletive solar energy may be, one major problem can be summed up in the elusive word “taste.” Public acceptance of the external appearance of the solar roof collector, wall, or backyard or frontyard solar collecting frame will probably play a major part in the rate of development in the next few years. There have already been cases where solar installations have been discouraged by neighbors who did not like the view or perhaps the glare. Civic club and homeowners’ association covenants, irritation and pressure from individuals who must face the solar-roofed house, regulations, resolutions, and ordinances from local subdivision appearance control, and zoning boards intent upon preserving the homogeneity of the neighborhood can soon discourage the timid builder and his architect—even when some energy savings lie in the future.⁵⁶

If life cycle savings seem too uncertain, if there are no immediate monetary incentives in the form of a tax reduction or the ability to pay out the solar energy unit cost at a lower-than-normal rate of interest, if there seems to be uncertainty in the parts supply or securing maintenance and repairs, if the banker is not a ready lender,

53. The University of Houston at Clear Lake City, Texas, will install an 18,000 square foot solar collecting unit to heat, provide hot water, and 75 tons of air conditioning for a 35,000 square foot building. This project will be funded, installed, operated and evaluated throughout its useful life by NASA's Marshall Space Flight Center, Alabama. Data will be obtained to aid in the development of commercially feasible solar units of this size. *Houston Post*, August 19, 1977, Sec. A, at 15, col. 4.

54. Legal Barriers, *supra* note 4, at 172.

55. *Id.* at 178.

56. See *supra* note 3.

and there is a surrounding climate including otherwise knowledgeable and authoritative people who claim that there is plenty of fossil fuels for future heating, air conditioning, and electric power generation, then the average American will look with curiosity at the solar energy product folders—but will buy something more traditional, more like what his neighbors have, something more expensive in the long run.

Fortunately, a number of things can be done. In its FEA survey, Booz-Allen made the following recommendations:

- Indirect actions can probably be effective in creating a climate of general solar energy conceptual and aesthetic acceptability.

- Specific programs should include:

- Adoption of solar equipment on public buildings

- Solar energy features in local newspapers, including pictures of solar homes, and

- Encouragement of display of solar equipment in home shows.

- Incentive and information programs can be designed to encourage manufacturers to develop aesthetic technologies

- Aesthetic considerations are less important on commercial buildings

- Encouragement of commercial installations can provide a climate of solar acceptability, and

- It is possible that if the major implementation of solar energy is for low-cost housing projects, the technology could develop an image as a substandard substitute for electricity. This could create additional acceptability barriers to further diffusion.⁵⁷

Building Codes. There is a multiplicity of building codes over the United States, and little or nothing is being done to bring about standard building regulations for the entire nation. This, in itself, inhibits technological innovation, for there are fifty possible bodies of state law and several thousand city ordinances that can be brought to bear on any “new” concept that might otherwise receive national attention and distribution for sales and use.⁵⁸

Standards and Building Codes. *Standards* generally refer to criteria for rating or approving equipment. *Codes* refer to a more formal set of regulations for controlling the specifications and quality of buildings. Codes can be viewed as a formal, legal, collection of stan-

57. Booz-Allen, *supra* note 4, at VII-8, 9.

58. Rivkin, WORKSHOP, *supra* note 4, at 2. For a full-scale investigation into the possibility of utilizing judicial decision-making as a means of removing impediments to building code changes, in a general context, see Rivkin, *Courting Change: Using Litigation to Reform Local Building Codes*, 26 RUTGERS L. REV. 774 (1972). See also Legal Barriers, *supra* note 4, at 49, for a critical examination of codes as serious potential barriers to solar technology spread.

dards adopted by a locale. Since solar equipment-related standards and codes are different facets of the same issue, they are here discussed together.^{5 9}

Regulation of Building Materials and Design. Two well-established procedures exist for devising building codes. The first is to set prescriptive standards that designate specific building materials and how they are to be used, such as specifications for the type and installation of electrical wiring. The other method is to establish performance criteria that are descriptions of what the materials or designs must do or objectives they must attain. Keyed to function rather than design, they are greatly preferred by architects and engineers as they allow flexibility and reduce unnecessary financial burdens.^{6 0}

Monetary Costs. The patchwork of current building codes and the somewhat unique requirements of the solar industry make it difficult to estimate the dollar investment necessary to develop standards. Four of the five proposals on the creating of standards that were introduced into state legislatures in 1975 died in finance committee. None of the authorizations requested more than \$100,000, which is probably closer to the low end of the likely cost of a standards development effort. Separate or independent state efforts to produce codes are likely to be expensive and cost-ineffective; given current state and municipal finances even small expenditures are a burden.^{6 1} It would almost certainly be best if a uniform national system of standards and codes could be developed along with a program to consider the specialized characteristics of local markets:

[R]eview commissions should encourage and facilitate comment from a statewide geographic representation of architects, builders, developers, consumer advocates, trade unions and guilds, and the general public. These reviews should be made known to the parties responsible for national standards development while the standards are in the draft stages, and when consensus national standards are in final form, the state and local agencies should act immediately to incorporate the standards into existing building codes.^{6 2}

59. Booz-Allen, *supra* note 4, at VII-1.

60. Thomas, *supra* note 4, at 4.

61. Booz-Allen, *supra* note 4, at VII-3, 4.

62. Booz-Allen, *supra* note 4, at VII-7. The Federal Energy Administration commissioned a study by Arthur D. Little, Inc., of the energy and economic impact which would be brought about by a construction code designed to promote energy conservation in buildings. This code, a voluntary standard, was produced by the American Society of Heating, Refrigerating and Air Conditioning Engineers (ASHRAE) in 1975. The standard was designated ASHRAE 90-75. The Arthur D. Little, Inc., report contains a description of the implications of the adoption of this standard, and is well worth reading: *Energy Conservation in New Building Design: An Impact Assessment of ASHRAE 90-75*. Report prepared for the Office of Building Programs, Energy Conservation and Environment Division, Federal Energy Administration. Conservation paper No. 43B (1976).

Proposals and Enactments of Standards and Codes. Several efforts, led by the federal government and involving standards groups and trade associations, are currently in progress to develop solar equipment criteria, testing procedures, and approved specifications. These efforts are being pursued under the Solar Heating and Cooling Demonstration Act of 1974 and may take as much as five years to develop.⁶³

State legislative efforts are less advanced than federal: five states—New York, Florida, Vermont, Connecticut and California—have introduced legislation that involves standards development. In general, these proposals have not met with success. The State experiences are as follows:

New York, Florida, and Vermont considered legislation with virtually identical language. The New York and Vermont bills requested \$50,000 from the state legislature; the Florida bills left the amount unspecified. The three states have referred the bills to committees where no action has been taken since 1975.⁶⁴

Under separate legislation, Florida now requires that the hot water systems in all new buildings have plumbing that will accept solar system retrofits. That is, however, a nominal requirement, as plumbing need not be led to the roof, and it will not appreciably reduce the costs of future solar retrofit installation.⁶⁵

The Connecticut proposal provides for a legislative committee to review and propose solar equipment codes. It is inactive in Connecticut's ways and means committee and has not been reconsidered to this date.⁶⁶

The California proposal is more comprehensive than that of the other states. It authorizes the California Energy Resources Conservation and Development Commission, which began in January 1975, to develop standards and codes for construction, safety, materials, and installation. It also requires that these standards and codes be reviewed and implemented by the State Department of Housing and Community Development. This bill also authorizes cities and counties to require that new buildings subject to the state housing law be constructed in a manner permitting installation of solar heating and cooling devices.⁶⁷

Special attention was paid to a study of energy utilization in Flor-

63. Booz-Allen, *supra* note 4, at VII-4, 5.

64. Booz-Allen, *supra* note 4, at VII-6.

65. Booz-Allen, *supra* note 4, at IV-18.

66. Booz-Allen, *supra* note 4, at VII-6.

67. *Id.*

ida; no serious barriers were found to be present in housing and building codes.⁶⁸ The study authors recommended inclusion in the state-wide building code now under development of specific guidelines to insure that solar system installations meet minimum standards of quality and that the consumers' interests are protected. It was recommended that the code should be written in a way which does not restrict the development and marketing of innovative solar system designs in the future.⁶⁹

In Houston, Texas, a recent building code provides that "design, construction, use, location, and maintenance of all direct solar systems . . ." be regulated. All active solar systems require a building permit, and the following kinds of disciplines: "A plumber for solar water heating and/or swimming pool; electrician, if the solar energy is to be converted into electrical energy; air conditioning mechanic if other."⁷⁰

Labor Regulations. A barrier, which until very recently has caused difficulty and expense in construction, lies in organized labor's resistance to unknown work situations, where the work cuts across several job classifications.⁷¹ Since solar energy installers have not yet become part of a total scheme of marketing, installation, and training, there will be continuing change of job specifications, work orders, etc. Small contractors may be unable to implement the work-site changes that may be the most efficient manner to make solar energy installations work properly, yet those contractors may be those most willing to try innovative ideas to market their houses.

Recently Robbins noted:

We all know that labor unions often carve construction operations into small pieces to protect the skills of individual union members. There is no question that substantial questions will arise in the characterization of solar device with respect to structures. If it is mounted on the roof, it may be a part of the roofing. If it is mounted in the yard, it is an independent structure . . .

An interim agreement has been reached by the United Association of Journeymen and Apprentice of the Plumbing and Pipe Fitting Industry of the U.S. and Canada, and the Sheet Metal Workers' International Association providing that:

- (1) Solar collectors or panels with tubing and or piping for liquid flow as well as all supports for same and any rigging will be

68. Booz-Allen Florida, *supra* note 4, at IV-18.

69. *Id.* at IV-19.

70. CITY OF HOUSTON, BUILDING CODE, Chapter 88, Regulating Direct Solar Energy Applications, amended 9 November 1976.

71. Legal Barriers, *supra* note 4, at 154.

handled and erected by a composite crew equal in numbers of members of the respective unions.

- (2) Sheet metal workers will handle installations of solar collectors where liquid is not used as a collector medium.
- (3) All pipe work in connection with an installation will be performed by members of the Pipe Fitters Association.
- (4) Duct work will be performed by members of the Sheet Metal Workers' Association . . .⁷²

The City of Houston's amended building code specifies that: plumbers install water heating and or swimming pool heating units, that electricians install the units, if they convert solar energy into electricity, and that air conditioning specialists install all other installations. Permits will be issued to individuals who are constructing units to be owned by them, except for units that convert solar energy directly into electricity.⁷³

OPERATING IMPEDIMENTS AND INCENTIVES

Two problems appear to have most influence on the cost of operating solar units; these are utility regulation and structure and insurance coverage.

Utility Structure and Regulation. One of the most difficult barriers to overcome is the invisible barrier produced by those who see the widespread use of new sources of energy as a threat to their vested interests, economic pursuits, and jobs.⁷⁴ The electric utilities will represent an important barrier, because they fear that too much solar energy will be a threat.⁷⁵

The appropriate solution is to gain utility participation in the solar heating and cooling market (as well as in the even more threatening central generation of electrical power by direct solar-thermal means).⁷⁶ Utility ownership and leaseback of solar systems has been suggested as one option.⁷⁷ (This activity has been going on in California for some years.) In this mode, solar system cost could be incorporated in the monthly utility bill; the use of gas vs. electricity generated by solar energy by direct solar heating could be optimized for the season of the year and for other economic factors.

72. 4 SOLAR ENGINEERING 17 (April 1977).

73. CITY OF HOUSTON, BUILDING CODE, *supra* note 70.

74. For a comprehensive discussion of the barrier imposed by the public utility plight in the face of national gas shortages and rising costs of generating stations, see Legal Barriers, *supra* note 4, at 86.

75. Booz-Allen Florida, *supra* note 4, at Appendix A(52).

76. Jones, *supra* note 4, at IV-2, 3.

77. *Id.*

Areas of Conflict. An energy source that displaces electricity sales reduces the utility's energy market share, as does conservation activity; these measures would act to reduce net sales and thereby reduce net profits. If the rate of energy consumption is different at different parts of the day and night, where the utility had prepared to meet a different peak, profits could be lost.

The effect of solar heating and cooling systems may have the most impact on load factors from hour to hour rather than on total amount of sales of energy. For example, a solar thermal system that reduces total energy consumption by a customer but does not affect the amount of electricity the customer demands at the time of system peak demand could have the effect of requiring the utility to maintain generating capacity to serve the customer's peak demand without allowing the utility to recover its total cost because the off-peak sales would be lost.

The utility would have to maintain generating capacity to serve the customer's peak demand period, but the utility would not be compensated for off-peak sales lost to the solar competitor.⁷⁸

We have not yet found a way to store electricity as electricity efficiently for later consumption, and we have taken the position that every utility customer has a right to electric energy on demand. This has forced the utilities to keep available the capacity for meeting the peak. When in an emergency it cannot do so, we castigate it.⁷⁹

Public Utility Impediments. If users adopt solar systems in addition to electric utilities, the supplier of electricity must have energy available on demand, but the price that the user will pay may be higher for both sources than it would have been for electricity alone (provided fossil fuel costs did not rise).

Electricity is now priced under an average cost method; if solar energy were to be used during the peak periods, then both the utilities and the customers might benefit. But if solar energy use reduces off-peak use of electricity, then peak period requirements for energy may not be changed, and the peak period costs would be spread over fewer kilowatt hours of electricity, and price would go up as utility company load factors were worsened.⁸⁰

Public Utility Incentives. If the utilities were to adopt a method of peak load pricing, solar units would reduce the customer's pay-

78. Jones, *supra* note 4, at IV-3.

79. Cf. the blackout in New York City, July 13, 1977 and the public's attitude toward the Consolidated Edison Company, TIME, July 18, 1977.

80. Jones, *supra* note 4, at IV-6.

ments for expensive electricity, and they could pay reduced prices when they used off-peak electricity, increasing the economic desirability of solar devices. Experiments with such rate structures are now beginning.⁸¹

The impediments discussed above could be turned into incentives by the following means:

- (1) Rate structures should not be biased against small users.
- (2) Communal solar facilities should be encouraged and regulatory commission rules should be changed when there are unreasonable impediments to them. Newly created regulatory commissions that are designed to handle solar energy should be given eminent domain power.
- (3) Hostility or retaliation on the part of present utilities should be limited by those governing the rate structure.
- (4) Just because private solar devices might compete with utility capital investments, they should not be prohibited.
- (5) Public utility companies should be encouraged to experiment with means of adding solar devices on line, or promotion of the use of solar energy by individuals.
- (6) If necessary, federal jurisdiction should be involved.⁸²

Social policy issues still remain, such as: "[S]hould utilities be encouraged to use and sell solar energy? Should a house or shopping center with a solar collector be considered a power producer for tax purposes? Should solar energy cooperatives be formed under present or new utility regulations? If neighbors get together to install a solar conversion system to distribute energy only among themselves, would they be subject to regulation as a public utility? . . ."⁸³

If utilities were to be encouraged to own and lease solar electric or other systems to consumers with the solar system paid for in a monthly utility bill, utilities could derive substantial economic benefits from controlling the utilization patterns of solar systems.⁸⁴ Another type of program would add the cost of insulation to utility bills to be paid back at a relatively low rate of interest.⁸⁵

Processes of Change. In order to accomplish the changes to a utility system involving solar energy, public utility commission charters would need to be changed through legislative initiatives. One approach might be to revise charters to include responsibility for conservation of energy resources through pricing policies, fuel substi-

81. Robbins, WORKSHOP, *supra* note 4, at 13.

82. *Id.*

83. Thomas, *supra* note 4, at 6.

84. Booz-Allen, *supra* note 4, at I-6.

85. Hillhouse, *supra* note 4, at 16.

tution, and stimulation of new technologies. States might provide utility managements with information concerning solar energy feasibility in geographic areas in order to facilitate industry assessment of approaches to participation in solar system markets. Active participation on the part of utilities in solar energy markets could be beneficial both to the solar industry and to end users, but not at a net cost to utilities. Mechanisms need to be developed to ensure they do not inadvertently introduce unexpected economic disincentives elsewhere, or for consumers not using solar systems.⁸⁶

The National Conference of State Legislatures has reported that "the appropriate solution to the conflict between solar energy and electric utilities is the establishment of a valid relationship between electric energy price and electric energy cost . . ." This would substantially improve the economic attractiveness of solar thermal development, including space cooling, and "would create strong incentives for solar energy utiliziers to acquire systems designed for optimum patterns of utilization from both the utility . . ."⁸⁷ and public policy viewpoints.

Insurance. Another impediment to acceptance of solar heating and cooling may be the high cost of or unavailability of insurance. Solar devices may have special vulnerability to damage caused by falling trees and branches, ice, hail, wind, and vandalism. Robbins points out that:

[W]ithout reasonable insurance rates, the risk may be beyond the ability of individual owners to assume. Especially critical here are the very large expanses of glass or plastic. . . . Basic insurance policies need to be analyzed to see what coverage is currently available for collectors. Another possibility is a federal insurance program analogous to . . . flood insurance. . . . New structures might damage property of others, thus creating a combination of insurance and tort liability problems. . . .⁸⁸

All of the above problems could be alleviated by proper design and the provision of liability insurance.

ATTITUDES

Certain incentives—such as outright grants and subsidies—would probably be met with skepticism, since they carry with them high administrative costs, the potential for abuse by corruption, and con-

86. Booz-Allen, *supra* note 4, at VI-19, 20.

87. Jones, *supra* note 4, at 1-3.

88. Robbins, WORKSHOP, *supra* note 4, at 13; Legal Barriers, *supra* note 4, at 172.

ceivably could be cut out of future governmental plans more easily than they can be included in present ones. There is a feeling that subsidies tend to allow the unscrupulous and the inefficient to flourish without having to come up to market standards.

The federal government has begun to demonstrate a positive attitude for the first time. The President's National Energy Plan provides for up to \$100 million for the installation of solar equipment in federal buildings. A public education initiative is proposed in the form of a joint federal-state program of development of standards, certification, and training of equipment installers and information gathering and dissemination.⁸⁹

Four states have appropriated funds for demonstration of solar heating and cooling systems on state-owned or financed buildings.

Colorado: The north campus of the Community College of Denver had the largest solar energy heating and cooling installation in the world when it was completed at the end of 1976; state funds of \$736,000 were expended for the system.

Iowa: The state capitol complex in Des Moines has a solar heating demonstration system for which \$200,000 was appropriated.

Nevada: The desert research institute of the University of Nevada received \$370,000 in state funds for a solar heated and cooled solar energy research facility.

New Mexico: A solar heated and cooled office and laboratory constructed with \$1,500,000 of state funds to be shared by New Mexico State University and the State Department of Agriculture has been completed at Las Cruces. A residential building is also the beneficiary of a \$75,000 grant for a demonstration solar heating and cooling plant.⁹⁰

Some cities have moved a considerable distance along the way to a concerted program. Los Angeles, California, has mobilized the Los Angeles Building and Construction Trades Council (AFL-CIO) and the Task Force on Alternative Energy Sources of City Commission Presidents, which joined the Mayor of the City in forming a Solar City Committee. The city is planning to heat swimming pools at schools and municipal parks, and it is possible that a \$6.6 million grant will be received from the U.S. Department of Commerce Economic Development Administration to convert swimming pool heating from natural gas to solar power. The city's Department of Water and Power, cooperating with the Southern California Edison Company, a private utility firm, proposes to build a solar generating plant

89. NATIONAL ENERGY PLAN, *supra* note 2, at 75.

90. Binns, TURNING TOWARD THE SUN 31 (1975).

in the Southern California desert, to generate enough electricity for 2,500 homes. Southern California Edison also plans a program involving the installation of 1,400 electric-assisted solar hot water heaters in new homes. The hope is that solar energy would give Los Angeles a clean energy supply and a new segment of technical expertise and facilities.⁹¹ Phoenix, Arizona, and Davis, California, are also prominent in the use of solar technology.⁹²

Solar energy possibilities are even featured by those who advocate a slowing of growth. Recently, Commoner devoted a full chapter to solar energy possibilities. Nothing in the chapter is new, but ten or even five years ago such a subject would have been thought too speculative for inclusion.⁹³

With the acceptance of solar energy by popular "tastemakers," removal of barriers by local governing bodies, and incentives from governments at all levels, solar heating and cooling can be fully utilized.

SUMMARY

The progress of heating and cooling buildings by means of energy from the sun will be highly dependent upon the economic and legal actions taken by states to supplement federal energy policy, which is only now beginning to be formulated in concrete terms. At the present time, state and local ordinances contain many impediments to advancement, but the situation is changing; seventeen states have passed enabling legislation to exempt solar installations from property tax assessments. Areas in which barriers can be additionally lowered and incentives increased include the following:

Access to Sunlight. As a result of judicial lawmaking in the United States, it is reasonable to conclude that zoning and land use planning, including the use of transferable development rights (with perhaps some resort to easements) will be the methods of choice for achieving equitable access to solar energy. These activities are really the province of state and local legislative bodies. The courts do not seem to have speedy remedies for access problems. The U.S. Congress may have to pass an overall statute that will make the responsibilities clear.

Marketing and Financing. The major actions that will provide an incentive for the market system to operate quickly include federally

91. News Release, City of Los Angeles, Wednesday, June 9, 1976, p. 1.

92. Letter from Thomas P. Graves, Director, Energy Staff, National League of Cities, United States Conference of Mayors (June 15, 1977).

93. B. COMMONER, *The Poverty of Power* 121 (1976).

funded, state-operated programs of grants and loans, which are beginning to accelerate, property tax relief by the states to encourage the purchase of units, capital investment credits for both manufacturers and users, sales and income tax incentives. All of these require federal, state, and local legislation, which is just beginning.

Design and Construction. The aesthetic barriers need to be overcome by a great deal of education of the general public and exposure to innovative designs. Building codes in over three thousand jurisdictions need attention, and materials and operating standards need development. This activity is in its infancy, but there are a number of progressive cities that are models for others to copy, including Los Angeles and Davis, California, and Phoenix, Arizona. Building standards and housing codes should be written so as to insure quality solar installations but to avoid restricting innovative systems concepts. The jurisdictional problems that labor unions have in determining who is responsible for solar heating and cooling unit installations need to be settled at the local level, perhaps by local ordinances.

Operating of Solar Heating and Cooling. Because of the intermittent nature of the solar supply, utilities will have to be linked into the system in ways that have not yet been settled, since there are regulations that interfere with utility desire to participate in the solar area: regulations that prohibit utility companies from selling equipment, problems of competition between utility company geographic monopolies, and the need for incentives to individuals and organizations to compete with utility companies on individual or community based units. State-wide public utility commission regulation, legislation, and local ordinances are needed.

Attitudes of Institutions. The attitudes of state and local governing bodies, of executive and legislative groups in the states, and of the judiciary need to be attuned to the important trends of the future. These are intangibles that will operate either as barriers to or incentives for the utilization of solar heating and cooling to its fullest extent in the next twenty years. Much will depend on the persistence of the federal executive branch, which must exert leadership. The expression of national energy policy in the President's National Energy Plan and its first review in the House of Representatives bodes well.

Part 5
Pollution Control

IMPLEMENTING FEDERAL ENVIRONMENTAL POLICIES: THE LIMITS OF ASPIRATIONAL COMMANDS†

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INTRODUCTION

There is an understandable tendency, whenever reliance is placed upon legal institutions for solutions to complex and pressing social problems, to pay relatively scant attention to the inherent limits upon the effectiveness of law. This tendency has been particularly evident when the need for solutions is perceived to be urgent, as it currently is in the field of environmental regulation. This Article examines the limits of a regulatory technique frequently relied upon by federal lawmakers in recent years: attempts to compel individuals and organizations to cooperate in good faith—to “aspire”—in implementing federal environmental policies. Frequently these attempts occur in the context of forcing addressees to develop pollution control technology. As the following analysis will make clear, however, they occur in other contexts as well. In Part I, the theoretical bases and historical antecedents of the limits upon the effectiveness of aspirational commands are developed. This analysis is used in Part II to examine some of the difficulties that have been encountered in implementing federal environmental policies.

It should be emphasized that the central thrust of this Article is *not* that federal attempts at environmental regulation will not succeed. To the contrary, a variety of regulatory approaches other than those focused upon here are available to implement important federal environmental policies.¹ Indeed, it does not follow from the analysis in this Article that aspirational commands attempting to compel good faith cooperation ought never to be employed. To the extent that forceful statements of policy contained in such commands provide a moral backdrop against which to measure and assess (and there-

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1. Professor Tribe, who has written extensively concerning the relationships between law and technology, has stated that for a regulator to bring about a shift in the direction of the technology development of an organization, he must use one of three methods or a combination of them: (1) he must tell the organization specifically what to do; (2) he must alter the environment in which the organization functions in ways calculated to generate the change; (3) he must restructure the organization so that it more closely reflects his own values. L. TRIBE, CHANNELING TECHNOLOGY THROUGH LAW 52-53 (1973). These methods are not limited to contexts in which technology is sought to be developed, but apply in any instance in which one person attempts to enlist an organization in the implementation of his values. Consistent with the analysis in this Article, Professor Tribe does not list the use of aspirational commands as one of the methods by which an organization's course of technology development can be changed.

fore gradually to influence) conduct affecting the environment, legal rules couched in essentially aspirational terms may constitute a necessary and important component of the overall program of federal environmental regulation.² But they must be placed in a proper perspective. Relying too heavily upon such rules generates substantial costs, including a general decline in respect for law. Such rules are also likely to produce unfair and seemingly random patterns of enforcement which in turn will generate not only disrespect for law in general, but also cynicism regarding the environmental policies which these mandates purport to advance. Indeed, too much reliance upon such commands may actually produce patterns of response which are the opposite of those desired. Thus, the following analysis is offered in the hope of strengthening, rather than weakening, federal environmental regulatory programs.

I. ASPIRATIONAL COMMANDS: THEIR NATURE AND LIMITS

"Aspiration," as that concept will be employed in the following analysis, refers to the state of mind with which an actor performs a task. An actor performs "aspirationally" when he aims at accomplishing as best he can the task's underlying objectives as he perceives them.³ Since the objectives of many tasks are generally understood to carry limitations upon the commitment of resources, the phrase "as best he can" does not require a single-minded, "drop everything else" approach to performing the task. Instead, aspiration requires that, within these limitations, an actor will perform to the best of his ability. Nor need the task be described explicitly in aspirational terms to be aspirational. "Do your best" may accompany a request that an actor perform a given task; but even without such words the actor will be aware of the general nature of the task's purpose and will understand that he is to act in a way to achieve that purpose.⁴

2. For a collection of materials on the effectiveness of moral suasion as an adjunct of formal regulatory techniques, see L. FRIEDMAN & S. MACAULAY, *LAW AND THE BEHAVIORAL SCIENCES* 246-53, 307-41 (2d ed. 1977).

3. It does not make much sense to discuss aspiration in connection with tasks the actor undertakes upon his own initiative, in contrast to tasks assigned to him by another. Under the first circumstance, the actor defines the purpose of the task himself and typically acts in a manner consistent with his self-selected purpose.

4. Thus, even when told to "wash the dishes," an addressee is presented with a considerable range of possible responses, including some which deserve to be termed aspirational. Moreover, an addressee bent upon thwarting the addressor's purposes will certainly have the opportunity to do so—e.g., by "accidentally" dropping the dishes in the process of washing them. For this reason, addressors of commands of this sort usually rely upon specific performance objectives. See text accompanying notes 46-50 *infra*. For the view that all commands, however formal and specific, inevitably require some "filling in" in light of their underlying purposes, and hence by implication present the opportunity for the addressee to aspire in responding to them, see Fuller, *Positivism and Fidelity to Law—A Reply to Professor Hart*, 71 HARV. L. REV. 630, 661-69 (1958). See also Murphy, *Old Maxims Never Die: The "Plain-Meaning Rule" and Statutory Interpretation in the "Modern" Federal Courts*, 75 COLUM. L. REV. 1299 (1975). Of course, different commands require varying degrees of "filling in," and to that extent are more or less aspirational. For example, the command to wash the dishes is less aspirational than one to develop a low pollution automobile engine.

This Article is primarily concerned with legal commands to aspire—that is, aspirational commands backed by threats of legal sanction. Such commands are not always doomed to fail. For example, when an addressee is commanded by law to perform a task, he may perform aspirationally because he happens to share a commitment to the purpose of the task with the addressor. It is more likely, however, that insurmountable difficulties will arise whenever aspiration is made the subject of sanction-backed commands.

A. *Aspirational Commands and the Legal System*

From the very beginnings of our jurisprudence, common-law judges recognized that only essentially nonaspirational patterns of conduct may effectively be compelled by threats of legal sanctions.⁵ Thus, criminal law has traditionally consisted almost entirely of commands which are negative, specific, and nonaspirational. Tort law, although vaguer in some respects, is also predominantly negative and nonaspirational.⁶ Courts have generally refused to rely upon affirmative, aspirational commands even when they are confronted with specific contexts in which such commands might have appeared to be especially desirable—where, for example, a helpless person could be rescued by the active intervention of another.⁷ This same reluctance is reflected in the traditional refusal of courts to order specific performance of personal service contracts,⁸ and in the concern in administrative law with constraining, rather than compelling, the exercise of administrative discretion.⁹ It is no less clearly reflected in the restraint with which federal lawmakers in the American system have approached the delicate task of attempting to direct the conduct of the states.¹⁰

5. Legal philosophers have also noted the difficulties of enforcing aspirational commands. See, e.g., L. FULLER, *THE MORALITY OF LAW* (rev. ed. 1969). Professor Fuller distinguishes between the moralities of duty and aspiration, and insists that aspiration cannot be compelled. "There is no way in which the law can compel a man to live up to the excellences of which he is capable." *Id.* at 9.

6. Tort law usually does not impose liability upon the actor for failure to act absent some special relationship between the actor and the person injured. See generally W. PROSSER, *LAW OF TORTS* 338-50 (4th ed. 1971). The duty imposed by the law of negligence to avoid creating unreasonable risks is vague, to be sure, but liability does not turn on whether the actor did his best. See *Vaughan v. Menlove*, 3 Bing., N.C. 468, 132 Eng. Rep. 490 (C.P. 1837). See also RESTATEMENT (SECOND) OF TORTS § 283B (1965) (mental deficiency of an actor not relevant to the issue of negligence). Furthermore, in many instances, the duty to refrain from acting unreasonably is given much more specific content by reference to custom and statutes.

7. As a rule, neither the criminal law nor tort law in this country imposes a general duty to rescue. See W. LAFAYE & A. SCOTT, *HANDBOOK ON CRIMINAL LAW* 183 (1972); W. PROSSER, *supra* note 6, at 340-43. But see VT. STAT. ANN. tit. 12, § 519 (1973). The typical American approach has been to encourage, rather than to attempt to compel, rescue efforts by altering the tort rules of liability for injuries caused to the rescued person by the rescue attempt. See J. HENDERSON & R. PEARSON, *THE TORTS PROCESS* 399 (1975).

8. See generally 5A A. CORBIN, *CONTRACTS* § 1184, at 342 (1964).

9. See L. JAFFE, *JUDICIAL CONTROL OF ADMINISTRATIVE ACTION* ch. 9 (1965); Stewart, *The Reformation of Administrative Law*, 88 HARV. L. REV. 1667, 1687 (1975).

10. One commentator has observed:

Federal law often says to the states, "Don't do any of these things," leaving outside the scope of its prohibition a wide range of alternative courses of action. But it is illuminating to observe how rarely it says, "Do *this* thing," leaving no choice but to go ahead and do it. The *Federalist* papers bear ample witness to the Framers'

This does not mean that the American legal system is indifferent to the importance to society of aspirational conduct. However, it operates to encourage such conduct indirectly, rather than to compel it directly. The major legal institutions which the American system has traditionally relied upon to maintain sufficient levels of individual incentive have been property and contract.¹¹ Together, they provide the basic common-law framework for an economic marketplace in which decisions affecting resource allocations are made by means of contract bargaining. Bargaining is a voluntary process¹² in which each participant seeks to maximize the benefits to himself which flow from exchange transactions.¹³ The benefits which a participant derives from this process are then generally protected by the law of property. As a result, individuals are encouraged to use best efforts in their own self-interest.¹⁴ Building upon the common-law institutions of contract and

awareness of the delicacy, and the difficulties of enforcement, of affirmative mandates from a federal government to the governments of the member states.

Hart, *The Relations Between State and Federal Law*, 54 COLUM. L. REV. 489, 515 (1954).

Whatever the constitutional limitations upon the power of the federal government to regulate state activities may be, see *National League of Cities v. Usery*, 426 U.S. 833 (1976), most instances in which the federal government has attempted to control state governments by affirmative, aspirational commands, have been substantial failures. One of the most notable of the federal efforts was the attempt to assign to the states responsibility for enforcing the national prohibition laws. While the traditional reasons for the failure of prohibition have centered around the substantial refusal of citizens to obey the laws, it has also been recognized that the inability of the federal government to get the states to act affirmatively to discharge their enforcement responsibilities contributed to the failure. See A. SINCLAIR, *PROHIBITION: THE ERA OF EXCESS* 192-93 (1962). A similar inability of the federal government to compel state officials to discharge their responsibilities in connection with the return of fugitive slaves and fugitives from justice has also been noted. See Hart, *supra*, at 515.

The experience has been somewhat different in connection with the obligation of state court judges to apply and enforce federal law. Judges normally act conscientiously in this regard, perhaps out of the sense of professionalism that judges are expected to bring to their work. See K. LLEWELLYN, *THE COMMON LAW TRADITION* 45-51 (1960). On occasion, however, state court judges have deliberately refused to implement the clear commands of federal law when the values underlying state law are markedly different from those of federal law. This appears to have been the case in the ultimately successful challenge to a Utah statute which set different ages of adulthood for males and females. See *Stanton v. Stanton*, 30 Utah 2d 315, 517 P.2d 1010 (1974), *rev'd and remanded*, 421 U.S. 7 (1975), *original judgment adhered to*, 552 P.2d 112 (Utah 1976), *vacated and remanded*, 429 U.S. 501 (1977), *judgment in accordance with Supreme Court opinion*, 564 P.2d 303 (Utah 1977). Even when state court judges act in good faith to apply federal law, however, they may tend to exercise the discretion that inheres in applying the law in ways that are consistent with their own values and inconsistent with federal values. See Neuborne, *The Myth of Parity*, 90 HARV. L. REV. 1105, 1119 (1977). The same problems can also occur within the hierarchy of a single judicial system. See Note, *Judicial Performance in the Fifth Circuit*, 73 YALE L.J. 90 (1963).

11. See L. FULLER, *supra* note 5, at 28.

12. Only in rare instances, such as labor law, are persons directly compelled to bargain. See 29 U.S.C. § 158(a)(5), (b)(3) (1976). Even in the field of labor law, however, courts have avoided attempting to enforce such an aspirational command by requiring proof of bad faith to show that this section has been violated, rather than requiring proof of good faith to show that it has been satisfied. Furthermore, bad faith is not established by an examination of the negotiators' states of mind, but by examination of the conduct of the parties and through the use of *per se* rules. See generally R. GORMAN, *BASIC TEXT OF LABOR LAW* 399 (1976); Cox, *The Duty to Bargain in Good Faith*, 71 HARV. L. REV. 1401 (1958); Gross, Cullen & Hanslowe, *Good Faith in Labor Negotiations: Tests and Remedies*, 53 CORNELL L. REV. 1009 (1968).

13. "The economic test in [deciding whether to impose liability for breach of an undertaking] is whether the imposition of liability will create incentives for value-maximizing conduct in the future." R. POSNER, *ECONOMIC ANALYSIS OF LAW* 68 (2d ed. 1977).

14. "[T]he legal protection of property rights has the important function of creating incentives to use resources efficiently." R. POSNER, *supra* note 13, at 28.

property, legislatures and courts have intervened to assure the continued viability of, and freedom of choice within, the marketplace. These interventions have tended to assume forms which permit and encourage, but do not directly attempt to compel, the exercise of aspiration in the marketplace.¹⁵ Thus, while the legal system has encouraged aspiration through the creation of incentives, it has not sought directly to compel persons to aspire.

Nevertheless, there have been times when lawmakers have overcome their traditional reluctance to rely upon aspirational commands. Perhaps the greatest number of these have involved attempts by federal courts to enforce civil rights. In large measure, this use of aspirational commands is attributable to the fact that there have been substantial pressures upon federal courts to compel the states to cooperate in the attainment of the goals embodied in the Constitution. For reasons peculiar to the field of civil rights, aspirational commands have occasionally met with some success.¹⁶ In areas such as criminal procedure¹⁷ and school desegregation,¹⁸ however, courts have

15. These legal interventions include: (1) laws imposing constraints upon conduct in the marketplace considered destructive of free competition, such as antitrust laws and the law of fraud and misrepresentation; (2) laws imposing specific affirmative obligations designed to compel conduct supportive of competition, primarily conduct involving the flow of important information—e.g., the disclosure requirements of securities laws and truth-in-lending laws; (3) laws creating property interests in intangibles designed to provide incentives for artistic and technological creativity—e.g., copyright and patent laws; and (4) laws designed to influence, by means of subsidies and penalties, a wide range of decisions affecting resource allocations—e.g., tax incentives and grants-in-aid. To some extent these interventions may involve aspirational commands—e.g., the requirements of the securities laws that certain "material" information be disclosed. But they are less aspirational than would be direct commands to engage in the bargaining process. See note 4 *supra*.

16. As the next section indicates, the major difficulty involved with aspirational commands stems from a divergence in values between addressee and addressor. Aspirational commands, however, though difficult to enforce in the short run, may in the long run be an important force which helps to shape and alter attitudes. See note 2 *supra*. This is especially so when, over a period of time, the Supreme Court consistently proclaims that certain aspirational commands are embodied in the Constitution. The respect accorded to the Constitution and the Court in this country may help alter an addressee's values over time. In addition, civil rights matters do not ordinarily involve "the tragedy of the commons," which operates to lead persons to maximize their own short run self-interests at the expense of their long run welfare. See text accompanying notes 57-59 *infra*.

17. One example is the rule of *Miranda v. Arizona*, 384 U.S. 436 (1966), directing police to warn persons in their custody of the right to remain silent and the right to an attorney. Communication of the sort involved in giving such warnings is an aspirational activity, see W. ALSTON, *THE PHILOSOPHY OF LANGUAGE* 42-43 (1964), since the warning, if it is to be effective, must not be given simply as "a preliminary ritual to existing methods of interrogation," 384 U.S. at 476, but must "show the individual that his interrogators are prepared to recognize his privilege should he choose to exercise it." *Id.* at 468. As one study of the impact of *Miranda* concluded: "A . . . difficult—and probably insolvable—problem is to insure that warnings will be full and fair. The tone of a detective's voice, a few words added or omitted, the context in which a warning is given—all are factors difficult to review, and hence to control, but each may profoundly affect the suspect's understanding of his rights." Project, *Interrogations in New Haven: The Impact of Miranda*, 76 YALE L.J. 1519, 1614 (1967). This study, and others, have concluded that the requirements of *Miranda* have had little effect upon the day-to-day criminal process. See Medalie, Zeitz & Alexander, *Custodial Police Interrogation in Our Nation's Capital: The Attempt to Implement Miranda*, 66 MICH. L. REV. 1347 (1968); Seeburger & Wettick, *Miranda in Pittsburgh—A Statistical Study*, 29 U. PITT. L. REV. 1 (1967).

18. Frustration has often been the lot of federal judges attempting to compel school officials to act affirmatively to develop and implement plans to achieve racial integration. Orders to school officials to so act will succeed only to the extent that school officials share the same basic values as the court. See U.S. COMM'N ON CIVIL RIGHTS, *FULFILLING THE LETTER AND SPIRIT OF THE LAW: DESEGREGATION OF THE NATION'S PUBLIC SCHOOLS* 92-102

encountered substantial difficulties whenever they have yielded to a felt necessity to rely upon aspirational commands to attain constitutional goals.

B. *The Difficulty of Enforcing Aspirational Commands*

It is important to distinguish the difficulties inherent in the enforcement of aspirational commands from the problems involved in the enforcement of law generally. Even nonaspirational commands will be difficult to enforce if the resources devoted to law enforcement are inadequate to the task, or if there is a general disrespect for the source of the law.¹⁹ Aspirational commands present problems of a different order, however. These difficulties stem from the divergence of values between addressor and addressee, a condition which is likely to occur when a lawmaker relies upon threats of sanctions. Thus, when the addressee of an aspirational command is indifferent to, or hostile toward, the values and objectives reflected in an assigned task, aspiration of the sort desired by the addressor will typically be absent. Instead of seeking to maximize the accomplishment of the addressor's values, such an addressee may be expected to respond by either secretly resolving not to aspire in the performance of the task, masking his unwillingness with feigned sincerity, or by honestly misperceiving the addressor's objectives, which typically will only be vaguely described in an aspirational command, and consequently aspiring to perform in a manner which is only marginally useful to the addressor. Indeed, these responses have been characteristic of the experience in civil rights cases.²⁰

It must be emphasized that the addressor's problems are not ameliorated by threats of sanctions.²¹ The addressor cannot determine, with sufficient accuracy to support a consistent application of sanctions, whether the addressee has secretly refused to aspire. Furthermore, he cannot reduce the risk of the addressee's misinterpretation of his intent because generally he must keep his instructions vague if he is to leave the addressee free to aspire. Of course, both risks could be reduced by telling the addressee specifically what to do. If the addressor could have been specific, however, there would have been no need to rely upon an aspirational command.²² Thus, there are two basic and unavoidable problems with employing sanction-backed aspirational

(1976). Of course, were such a concurrence of values to exist, it is unlikely that court-ordered integration would have been necessary to begin with. In extreme circumstances, courts may have to take over much of the day-to-day operation of school systems to accomplish the desired integration. See, e.g., *Morgan v. McDonough*, 540 F.2d 527 (1st Cir. 1976), cert. denied, 429 U.S. 1042 (1977).

19. See generally Evan, *Law as an Instrument of Social Change*, in *APPLIED SOCIOLOGY* 285-89 (A. Gouldner & S. Miller eds. 1965); Trubeck, *Max Weber on Law and the Rise of Capitalism*, 1972 Wis. L. Rev. 720.

20. See notes 17-18 *supra*.

21. The threat of a sanction may discourage open defiance, but this effect is not unique to aspirational commands. Even the addressor of a nonaspirational command may have enforcement problems if the command is not backed by a sanction.

22. Indeed, to the extent that the command tells the addressee specifically what to do, it ceases to be aspirational.

commands. These are, first, the problem of nonverifiability, inhering in the addressor's inability to determine whether the addressee has actually aspired in performing an assigned task; and second, the problem of vagueness, inhering in the characteristic openedness of aspirational commands.

1. *Nonverifiability.* The problem of nonverifiability in connection with legal commands to aspire is especially acute because it threatens one of the conditions necessary to the efficacy of a system of sanction-backed legal commands—the requirement that sanctions generally be imposed in response, and only in response, to nonconforming behavior.²³ To be sure, the addressor will be able to detect egregious instances of noncooperation—open defiance by the addressee, for example, will not pass unnoticed. However, there will usually be a range of responses available to the addressee that fall short of obvious bad faith, but that also fall considerably short of aspiration. Even assuming that the sanction is sufficient to discourage obvious bad faith responses, the addressor of a command to aspire will nevertheless be unable generally to determine whether the addressee has responded aspirationally. In a substantial majority of instances, the addressee will plausibly be able to assert that he has done his best under the circumstances, and the addressor will be unable to establish the contrary.

Thus far it has been assumed that the addressee of an aspirational command is an individual. Because most addressees of such commands in the context of environmental regulation are organizations such as business firms and governmental agencies, it is necessary to consider whether the problem would differ significantly if the addressee were such an organization. The answer depends upon the extent to which any attempt to dissemble requires the cooperation of large numbers of people. When many persons must cooperate in putting up an organizational false front, the relatively greater risks of being exposed tend to render attempts at pretense unattractive. Of course, management may frequently be in a position to dissemble effectively on behalf of an organization, and to that extent the problem of nonverifiability may threaten the efficacy of aspirational commands.²⁴ It is improbable, however, that large numbers of persons in an organization could effectively be involved in collective deceit.²⁵

2. *Vagueness.* The nonverifiability problem is starkest in the relatively rare instance in which there is a direct command to aspire in the performance of a simple and concretely defined task. In connection with most aspirational commands, however, the addressor will be unable to describe the task specifically, and accordingly will deliberately allow the addressee substantial discretion in the choice of how to perform. Although the problem of non-

23. See L. FULLER, *supra* note 5, at 81-91.

24. See, e.g., note 98 *infra*.

25. This point is largely intuitive. It would appear that the more people who are involved in collective deceit, the more likely it is that someone will expose it. The risk of exposure is increased by the fact that intraorganizational communication tends to be in writing, thus providing a record that is potentially open to greater outside scrutiny.

verifiability will still be present in such circumstances, vagueness adds another dimension to the addressor's problems in relying upon aspirational commands. In exercising his discretion in choosing among the alternative methods of performance, the addressee will tend to select alternatives consistent with his own values. It follows that in ways important to the addressor, the objectives sought by him will not be accomplished. This will generally occur even though the addressee honestly maintains that he is aspiring in the performance of the assigned task. The addressee may make a conscious effort to substitute the addressor's values for his own, but the more complicated the task to which he is assigned, the less likely he is to succeed with such a substitution, and the less likely it is that the performance will meet the addressor's own objectives. Nevertheless, in these circumstances the addressor could not fairly impose a sanction, although the addressee's performance departs substantially from what the addressor desired.²⁶

The problems that arise in connection with the unavoidable vagueness of aspirational commands tend to be more subtle than the problems associated with nonverifiability. A hypothetical example for purposes of clarification will be useful. Assume that a powerful but artistically inept monarch commands a poet to do his best, under threat of sanction, to write a poem that will please the monarch. Of course, such a command would present the poet with an opportunity to dissemble. However, unless the monarch's and the poet's aesthetic tastes coincide (which would be unlikely given the monarch's reliance upon a threat of sanction), the command would place even an honest poet in a quandary about what to do. Should the poem be long? Short? Lyric? Tragic? Presumably, basic parameters covering these elements could be established. But even if the monarch were to narrow the poet's choices by a general description of his preferences, the remaining possibilities would be practically limitless. Assuming a time limit has been imposed, and given the difficult task of determining the mix of aesthetic values peculiar to the monarch with any degree of precision, eventually the poet would be compelled to sit down and write with only minimal guidance from the mandate. Bearing in mind that the poet is not required to please the monarch, but only to try his best to please him, the poet should be safe from sanction.²⁷ But given the inherent vagueness of the command, the monarch would run a substantial risk of being disappointed with the results, even assuming a skillful poet, aspiring to please the monarch, and satisfied in his own mind with the work product.

The core of the problem threatening the efficacy of the aspirational command in this example resides in a mismatching of skills and values. The poet possesses the skills, but lacks the "proper" (*i.e.*, the monarch's) aesthetic values. By contrast, the monarch possesses the proper values, but lacks

26. See L. FULLER, *supra* note 5, at 63-65.

27. This assumes a monarch sensitive to the necessity for clarity in his official expressions and to the requirements of a rational and consistent application of sanctions. See notes 23, 26 and accompanying text *supra*.

poetic skills. In effect, the monarch is attempting to commandeer the poet's skills and bend them to his own aesthetic value structure. Because the monarch can only communicate his aesthetic preferences in vague terms, however, the end result is very likely to be poetry which, aside from the fact that it may fit some clumsy, monarch-imposed parameters of being long and tragic, or short and lyric, does not accurately reflect the monarch's aesthetic values. A dilemma is thus presented: the monarch lacks the skills to be sufficiently specific in his task description, and the poet lacks the ability to substitute the monarch's values for his own. Moreover, assuming a monarch with an appetite for poetry in a kingdom in which poets do not share the monarch's tastes,²⁸ the dilemma is largely unavoidable. The same factors which necessitate the monarch's commanding the poet to aspire to write poetry also prevent him from telling the poet specifically what to do.

Since aspirational commands in the context of environmental regulation are more likely to be addressed to organizations than to individuals, it is necessary to consider whether the vagueness problem changes with organizational addressees. It will be recalled from the earlier discussion of the nonverifiability problem that shifting from an individual to an organizational addressee tends to reduce the problems confronting the addressor of an aspirational command.²⁹ With respect to the problem of vagueness, however, the opposite result is likely to occur: such a shift exacerbates the difficulties encountered in attempting to compel aspiration. The reasons for this may best be understood by returning briefly to the example of the monarch and the poet. In that example, the problem of vagueness stemmed from the monarch's inability to communicate his aesthetic value structure to the poet. To some extent, this inability might be overcome if the addressee were an individual. Thus, were the poet to spend considerable time with the monarch, he might come to appreciate the monarch's values intuitively, and by a conscious act of will he might be able to substitute many of those values for his own.

In contrast, where the addressee of an aspirational command is an organization, especially a large organization structured along traditional, hierarchical lines of authority and responsibility, the possibility of achieving such a substitution of values is significantly reduced. The organization's values are often intrinsically and inseparably fused with its structure;³⁰ as such, the organization lacks the separate consciousness necessary to substitute the addressor's values for its own.³¹ To be sure, organizations are made up

28. In the actual world, the monarch would have a choice of poets, and presumably would choose one whose work he admired. But in the analogous context of government attempts to channel technology development, the conditions described in the text often exist—the government needs certain development, and the range of choice available to it is relatively narrow.

29. See text accompanying notes 23-25 *supra*.

30. See H. KAUFMAN, *THE LIMITS OF ORGANIZATIONAL CHANGE* 5-40 (1971); C. PERROW, *ORGANIZATIONAL ANALYSIS: A SOCIOLOGICAL VIEW* 171-74 (1970).

31. "The corporation *itself*, it is said, 'does no act, speaks no word, thinks no thoughts.'" C. STONE, *WHERE THE LAW ENDS* 3 (1975). For a description of the ways in which attempts

of individuals who exert personal influence in determining patterns of organizational behavior.³² But the structural constraints upon organizational change are just as important to an understanding of an organization's potential for adapting to outside directives.³³ A complex hierarchical organization inevitably responds to aspirational commands in ways more consistent with its standard operating procedures than with the values of either the addressor or the individuals making up the organization.³⁴

C. *Aspirational Commands and Regulatory Agencies*

The foregoing analysis of the limits of aspirational commands is supported by the existence of a phenomenon much commented upon by observers of American administrative law—the capture of regulatory agencies by those persons and organizations that the agencies are supposed to regulate.³⁵ A major function of administrative agencies is to translate vague and aspirational mandates of the legislature into specific, nonaspirational rules of conduct for those to be regulated. In technically complex matters, which are often the subject of administrative regulation, agencies often lack the expertise necessary to promulgate regulations that are specific and nonaspirational. In these circumstances, the agencies must rely upon those possessing the expertise—in most instances, the same firms which are to be regulated—for substantial assistance in the rulemaking process. And because the firms will not, and to a large extent cannot, effectively separate their technical expertise from their values, the regulations which emerge from such a process tend to reflect the values of the firms rather than any independent, congressionally imposed values. In this respect, the agencies are in very much the same position as was the monarch who attempts to capture the poet's skills without accepting the poet's aesthetic values.³⁶ In the end, both the monarch and the regulatory agencies are themselves captured by their dependence upon the expertise of those whom they seek to regulate. Even agencies established by Congress for the express purpose of asserting regulatory independence are unavoidably exposed to this risk of capture.³⁷

to introduce change in an organization fail because of the "calculated resistance" and "programmed behavior" of its members, see H. KAUFMAN, *supra* note 30, at 10-23.

32. See G. ALLISON, *ESSENCE OF DECISION* 3, 10-14 (1971); C. PERROW, *supra* note 30, at 2-7.

33. See G. ALLISON, *supra* note 32, at 67-78; H. KAUFMAN, *supra* note 30, at 5-40, 68-91.

34. See H. KAUFMAN, *supra* note 30, at 5-40, 68-91. See also K. ARROW, *LIMITS OF ORGANIZATION* 28-29, 39-43 (1974).

35. A variety of causes have been suggested for this phenomenon. See, e.g., M. BERNSTEIN, *REGULATING BUSINESS BY INDEPENDENT COMMISSION* 74-102 (1955); Cutler & Johnson, *Regulation and the Political Process*, 84 YALE L.J. 1395 (1975); Huntington, *The Marasmus of the ICC: The Commission, the Railroads, and the Public Interest*, 61 YALE L.J. 467 (1952); Noll, *The Economics and Politics of Regulation*, 57 VA. L. REV. 1016 (1971). The analysis suggested here is supported by Stewart, *supra* note 9, at 1686. Indeed, something close to "capture" of Congress by agencies, because of the relative expertise of the latter, is suggested by Ribicoff, *Congressional Oversight and Regulatory Reform*, 28 AD. L. REV. 415 (1976), and by Scher, *Conditions for Legislative Control*, 25 J. POL. 526, 532-33 (1963).

36. See text accompanying notes 26-28 *supra*.

37. The Consumer Product Safety Commission is a case in point. The Commission's need to rely upon industry-generated technical information in the development of product

The typical vagueness of mandates from Congress to federal agencies presents problems not only for agencies, but also for Congress and the federal executive (hereafter the Congress/Executive) in regulating the behavior of the agencies. The fact that agencies often respond affirmatively, even enthusiastically, to their mandates is due in substantial measure to a coincidence in the values of the agencies and of the Congress/Executive. Because the Congress/Executive are responsible for establishing, staffing, and maintaining the federal administrative agencies, they will often aspire in directions compatible with expressions of congressional and executive intent.³⁸ Viewed in this way, the agencies are not being compelled to aspire, but rather are being allowed to do so. Thus, the paramount concern of federal administrative law has been directed not at stimulating agency action in pursuit of congressionally established objectives, but rather at correcting instances of agency overzealousness by confining exercises of administrative discretion within the bounds established by Congress.³⁹ Consistent with the foregoing analysis, however, where the values of an agency are perceived to diverge from those of the Congress/Executive, efforts by the latter to assert meaningful control over agency values have generally been met with considerable resistance.⁴⁰

D. Possible Alternatives?

1. *Rewards, Not Punishments.* Although the preceding discussion demonstrates the unworkability of direct commands to perform tasks aspirationally, backed by threats of sanction, it might be thought that there are alternative methods by which aspiration could be compelled. One possible method would be to change the sanction from formal punishment—

safety standards has been a focus of criticism of the Commission. See D. ROTHSCHILD & D. CARROLL, *CONSUMER PROTECTION: TEXT AND MATERIALS* 367 n.24, 383-87 (2d ed. 1977).

38. See Stewart, *supra* note 9, at 1682.

39. See note 9 *supra*.

40. The divergence in values may occur because of a shift in agency values, perhaps due to the "capture" phenomenon discussed above, or because the Congress/Executive establishes a new mission for the agency which is inconsistent, at least in part, with the old mission. In such instances, efforts of the Congress/Executive to bring the agency values in line have generally met considerable resistance. See Robinson, *On Reorganizing the Independent Regulatory Agencies*, 57 VA. L. REV. 947, 983 (1971). The problems of legislative oversight are analyzed in J. HARRIS, *CONGRESSIONAL CONTROL OF ADMINISTRATION* (1964). The difficulties of control are exacerbated by conflicts between the President and Congress. Once an agency is created and in operation, the President and Congress may compete, rather than cooperate, in their control efforts. See M. BERNSTEIN, *supra* note 35, at 133-34.

Of course, the difficulties will be ameliorated if the Congress/Executive avoid the use of aspirational directives and address the agencies in relatively specific, nonaspirational terms. But this is not only difficult to achieve, see Ribicoff, *supra* note 35, at 419-20, but is also inconsistent with the premise upon which the existence of most agencies is based—the necessity of leaving the agencies free to exercise broad administrative discretion, see J. HARRIS, *supra* at 284. Although the Congress/Executive could withhold financial support from a recalcitrant agency, it will be recalled that the threat of sanctions adds little to the efficacy of aspirational commands. See notes 21 & 26 and accompanying text *supra*. Moreover, the risk that other important agency objectives would be impaired by the withholding of funds also serves as a deterrent to the use of the budget as a means of attempting to compel a shift in patterns of agency decisionmaking. See M. DERTHICK, *THE INFLUENCE OF FEDERAL GRANTS* 205-06 (1970).

the form which the analysis has thus far tacitly assumed it to be—to the withholding of a promised reward. Where the values of the addressor and the addressee are similar, the shift from punishment to reward may help to reduce the risk of a “backlash” effect—that is, a negative response out of resentment at being threatened where a positive response might have been expected absent such threats. But even in such instances, the distinction between punishments and rewards tends to blur, especially where rewards have been given on a sufficiently regular basis to create expectations that they will continue. In any event, where the values of addressor and addressee diverge substantially, the shift from punishments to rewards makes little difference, for it does not enhance the addressor’s ability to determine if the addressee has acted aspirationally. Thus, an addressee otherwise motivated to dissemble will find it just as easy to do so regardless of the form of the sanction. Furthermore, the use of rewards does not enable the addressee to determine the addressor’s values more accurately, and thus does not increase the likelihood that an addressee will succeed in implementing the addressor’s values even if he acts in good faith.

Although this conclusion may at first appear counterintuitive, its validity is borne out by the experience in recent years with federal grants-in-aid to the states.⁴¹ Typically, these grants-in-aid have been offered to the states “with strings attached,” and in many instances the federal “strings” have sought to induce aspirational conduct on the part of the addressee-states. Studies reveal that where the states have been antagonistic to the values reflected in vaguely stated federal objectives, efforts to lead the states to cooperate in the attainment of these objectives have succumbed to a combination of good faith misunderstanding of federal objectives and bad faith misappropriation of federal funds.⁴² In these circumstances, the states have been able to “take the money and run,” and the federal administrators have been substantially helpless to stop them.⁴³ Consistent with the analysis in this Article, the difficulties can be avoided only to the extent that either the states share the values reflected in the programs,⁴⁴ or the directives are stated in specific, nonaspirational terms.⁴⁵ Thus, the ineffectiveness of aspirational commands is not affected by either the existence of, or the form taken by, sanctions. Rather, their ineffectiveness stems from the fact that they are aspirational.

41. See generally M. DERTHICK, *supra* note 40; Fisher, *The Carrot and the Stick: Conditions for Federal Assistance*, 6 HARV. J. LEGIS. 401 (1969); Tomlinson & Mashaw, *The Enforcement of Federal Standards in Grant-In-Aid Programs: Suggestions for Beneficiary Involvement*, 58 VA. L. REV. 600 (1972).

42. See M. DERTHICK, *supra* note 40, at 193-218; Tomlinson & Mashaw, *supra* note 41, at 619-29.

43. The federal disbursement agency could withhold the funds. But more often than not this is viewed as a worse result than allowing a certain amount of misappropriation to occur. See M. DERTHICK, *supra* note 40, at 207-14; Tomlinson & Mashaw, *supra* note 41, at 620.

44. See M. DERTHICK, *supra* note 40, at 203-04.

45. *Id.* at 200. See also Tomlinson & Mashaw, *supra* note 41, at 610-11.

2. *Establishing Specific Objectives.* The addressor might be able to remove the requirement of aspiration from the command by first estimating the range of performance reasonably to be expected from an addressee, and then insisting that a specifically described, readily verifiable performance objective within the upper reaches of that range be achieved.⁴⁶ In theory, such an approach would remove both impediments to the effectiveness of aspirational commands. As long as the addressor is able to describe the objectives to be achieved with adequate specificity, and as long as those objectives are within the upper ranges of the addressee's capabilities, sanction-backed performance objectives should succeed in compelling aspiration. Indeed, this alternative approach has been suggested as one solution to the difficulties encountered in attempting to enforce the affirmative action obligations imposed by federal law.⁴⁷

The obvious limitation of this technique lies in the inability of the addressor to assess the addressee's performance potential accurately. If the declared objectives are set too low, best efforts will not be stimulated; if set too high, sanctions will be imposed upon addressees who tried their best. Of course, if the addressor's purpose is to achieve the stipulated objective irrespective of whether or not the addressee aspires in the performance of the task, the risk of setting objectives too low will not be presented. But the risk of setting objectives too high will remain in spite of the addressor's indifference to whether or not the addressee aspires. The threat to the viability of a system of governance by declared rules, presented by the possibility of routinely demanding the impossible, places severe constraints upon the addressor's ability to set ambitious objectives.⁴⁸ Thus, substantial problems will be encountered whenever the addressor's objectives fall in the upper range of the addressee's capabilities.

46. The setting of a specific performance objective is not the same as telling the addressee specifically what to do. With a performance objective, the addressor focuses on the outcome of the performance, and leaves the choice among alternative methods of performance to the addressee.

47. For example, Executive Order 11246 requires persons contracting with the federal government to agree to take "affirmative action" to employ persons "without regard to their race, color, religion, sex, or national origin." 3 C.F.R. § 402 (1970). In the event that any of these classes of persons is "underutilized" by the contractor, that contractor must act affirmatively—use his best efforts—to recruit and employ persons from that group. See *Developments in the Law—Employment Discrimination and Title VII of the Civil Rights Act of 1964*, 84 HARV. L. REV. 1109, 1295-96 (1971). It has been observed that the enforcement of affirmative action obligations will require the establishment of specific performance objectives in the form of numerical quotas, as this will be "the only feasible mechanism for defining with any clarity the obligations of federal contractors to move their employment practices in the direction of true neutrality." *Id.* at 1304. See also Sape, *The Use of Numerical Quotas to Achieve Integration in Employment*, 16 WM. & MARY L. REV. 481, 496 (1975).

48. See L. FULLER, *supra* note 5, at 70-79. Variations of the basic performance objective approach are available, but are likely to be ineffective in many situations. For example, a schedule of objectives, with additional compensation at each incremental performance level, could be established as a means of placing constant pressure upon an addressee to excel. The theory is that an addressee who attains a particular level of performance will not rest on his oars, but will be encouraged to aspire by the additional reward to attain the next level, and then the next, and so on until he has reached the limit of his capacity. However, if the rewards increase arithmetically rather than geometrically, the marginal benefit to the addressee as he approaches the limits of his capacity may be less than the increasing marginal effort

To ease these constraints, addressees might be encouraged to participate in the preliminary process of establishing the objectives. In fact, this has been an important part of the federal efforts to compel affirmative action.⁴⁹ Of course, where the activity sought to be encouraged would not inspire best efforts on its own merits, it can be expected that pretense and dissembling by addressees will occur at the objectives-setting session, although such a session perhaps would not be characterized by the same intense pressures as would be present later in the context of threatened imposition of sanctions. This might diminish the perceived need of the addressee to dissemble, but is unlikely to prove fruitful on many occasions. Another method of avoiding the imposition of sanctions in connection with overly ambitious performance objectives might be to recognize the excuse, "I tried my best, but failed." However, recognizing that excuse would build back into the system of performance objectives the difficulties of reviewing conduct on a "best efforts" basis discussed earlier.⁵⁰

In short, an addressor who desires that an addressee do his best in the performance of a task cannot accomplish this by either relying on promised benefits or by setting specific objectives for the addressee to achieve. The addressor can avoid the difficulties inherent in the use of aspirational commands only by resorting to commands that will not necessarily require that an addressee use his best efforts to achieve the desired result, *i.e.*, commands that are not aspirational.

II. ASPIRATIONAL COMMANDS IN ENVIRONMENTAL REGULATION

Aspirational commands only relatively recently have been substantially relied upon in the field of environmental regulation. Before the dramatic rise in public concern, responsibility for environmental management generally was left to the earlier described combination of common-law property and contract principles.⁵¹ To be sure, these basic principles were supplemented by tort concepts designed to protect what are viewed today as environmental

necessary to move to higher levels of performance. Geometrically increasing rewards, however, are likely to be too costly to the addressor when balanced against the additional benefits gained.

Another method of applying constant pressure is to establish the objective of winning in competition, supported by adequate incentives. This will stimulate best efforts if the competitors perceive themselves to be of roughly equal ability. However, where such equality is not present, best efforts may not occur for the same reasons as were recognized in connection with the basic performance objectives technique just discussed—for the more able competitors, the performance objectives will be too low; for the less able, too high.

49. For example, employers have been required to submit affirmative action programs as a part of minority recruitment efforts. See *Developments in the Law*, *supra* note 47, at 1291-97.

50. See text accompanying notes 19-34 *supra*. It might be supposed that recognizing the "I tried my best, but failed" excuse could be rendered workable and useful by placing a more substantial burden of proof upon the addressee. Nonetheless, the choice would inevitably come down to whether to believe him or not. It is difficult to see how the addressor's problem of nonverifiability is ameliorated when the choice is essentially one of the either-or variety.

51. See text accompanying notes 11-15 *supra*.

interests,⁵² and statutes performing the same function were not uncommon.⁵³ But these measures were consistent with the traditional patterns observed above—they placed specific, negative constraints upon what was otherwise a laissez faire marketplace approach to the allocation and use of environmental resources. Moreover, some of the environmental resources of greatest concern today—e.g., the ambient air and many of the great bodies of navigable water—were not recognized as resources in the economic sense, and thus were subject to no significant legal constraints regarding their appropriation and use.⁵⁴

It is now generally recognized that this traditional, laissez faire approach to environmental management fails to prevent the harmful and perhaps disastrous waste of precious natural resources.⁵⁵ The recent tendency toward environmental degradation can be explained, on two separate levels, by a destructive phenomenon often referred to by environmental commentators as “the tragedy of the commons.”⁵⁶ At the level of citizen conduct, the absence of adequate legal controls leaves persons free to behave individually in ways which, though marginally beneficial to their short run individual interests, leave them worse off in the long run than they would have been had they been subject to collectively imposed constraints.⁵⁷ At the governmental level, individual states are induced by the pressures of interstate competition to maintain systems of environmental regulation which, though marginally beneficial to each individual state’s short run economic interests, encourage patterns of conduct wastefully destructive of the resources crucial to the continued health and prosperity of the nation as a

52. The laws of trespass and nuisance, both public and private, furnish some protection to environmental values. See generally J. HENDERSON & R. PEARSON, *supra* note 7, ch. 10.

53. See, e.g., Refuse Act of 1899, ch. 425, § 13, 30 Stat. 1121 (codified at 33 U.S.C. § 407 (1976)). Although primarily concerned in its early years with navigation, this statute has become an important water pollution control measure.

54. The one obvious exception has been the development of a body of law governing rights to water in areas where water represents a scarce resource. See generally 1 R. CLARK, *WATERS AND WATER RIGHTS* 60-175 (1967).

55. See, e.g., B. COMMONER, *THE CLOSING CIRCLE* (1971); C. REICH, *THE GREENING OF AMERICA* (1970); Boulding, *The Economics of the Coming Spaceship Earth*, in *ENVIRONMENTAL QUALITY IN A GROWING ECONOMY* (H. Jarrett, ed. 1971).

56. See Hardin, *The Tragedy of the Commons*, 162 *SCIENCE* 1243 (1968). Professor Hardin illustrates the tragedy through the example of several sheep herders using a common grazing field. Each herdsman continues to add sheep until the optimum number of sheep for the field is reached. The rational herdsman does not stop adding to his herd at this point, however, since the benefit of adding an additional sheep accrues solely to the herdsman, while the costs—the effects of overgrazing—are spread among all herdsmen. If each herdsman is rational, each will keep adding sheep. Thus, each herdsman “is locked into a system that compels him to increase his herd without limit Ruin is the destination toward which all men rush, each pursuing his own best interest in a society that believes in the freedom of the commons.” *Id.* at 1244.

57. Hardin notes:

[T]he rational man finds that his share of the cost of the wastes he discharges into the commons is less than the cost of purifying his wastes before releasing them. Since this is true for everyone, we are locked into a system of “fouling our own nest,” so long as we behave only as independent, rational free-enterprises.

Id. at 1245.

whole.⁵⁸ Thus, from the federal viewpoint, environmental degradation presents a twofold problem: the traditional approaches to environmental management by regulation of individual conduct have proven inadequate, and the states acting separately are discouraged from initiating meaningful reform.

Departing substantially from the traditional patterns observed in the preceding section, federal responses to this environmental impasse have in recent years taken the form of attempts to compel the aspiration of both citizens and state governments—and even federal administrative agencies—in working out solutions. Why has this approach to environmental regulation been adopted so frequently in recent years? The answer may lie in the apparent lack of viable alternatives in the face of what many observers perceive to be impending environmental crises. The most obvious alternative—reliance upon specific, nonaspirational directives—can be, and has been, implemented.⁵⁹ However, the federal government often has lacked the expertise necessary for the imposition of specific solutions to many of the complex environmental problems.⁶⁰ In such circumstances, the federal emphasis has been upon aspirational programs aimed at compelling the development of technology. With respect to the relationship between the federal government and the states, the difficulties are compounded by significant practical limits upon federal enforcement capabilities. Traditionally, the individual states have been primarily responsible for enforcing regulations aimed at controlling the conduct of private citizens, and they possess by far the larger enforcement capacity. It would be prohibitively inefficient for the federal government to attempt to duplicate state enforcement mechanisms. Thus, even if sufficient specificity in environmental regulations were somehow achieved, federal regulators would feel pressured to attempt to compel state cooperation in enforcing federal regulatory schemes.⁶¹

Alternative regulatory approaches appear to provide little encouragement. For example, adjustments in the economic marketplace, aimed at forcing firms to internalize environmental costs as an indirect means of achieving more rational allocations of environmental resources, have proven

58. See Stewart, *Pyramids of Sacrifice? Problems of Federalism in Mandating State Implementation of National Environmental Policy*, 86 YALE L.J. 1196, 1211-12 (1977); Note, *Clean Air Act Amendments of 1970: A Congressional Cosmetic*, 61 GEO. L.J. 153, 161, 164-65 (1972).

The dampening effect of interstate competition has been recognized in connection with a variety of social welfare programs, such as unemployment compensation, see *Steward Machine Co. v. Davis*, 301 U.S. 548, 588 (1937), and workmen's compensation, see REPORT OF THE NATIONAL COMMISSION ON STATE WORKMEN'S COMPENSATION LAWS 124-25 (1972). In situations such as this, appeals to conscience will not offset the force of interstate competition. Indeed, it is obvious that those states that respond to such an appeal will be penalized competitively. See generally Hardin, *supra* note 56, at 1246.

59. For example, the performance standards for new stationary sources under § 111 of the Clean Air Act have been developed by the EPA into relatively specific emission control requirements. See generally W. RODGERS, JR., HANDBOOK ON ENVIRONMENTAL LAW 267-76 (1977).

60. See La Pierre, *Technology-Forcing and Federal Environmental Protection Statutes*, 62 IOWA L. REV. 771, 773 n.16 (1977). See also note 85 *infra*.

61. Cf. A. SINCLAIR, *supra* note 10, at 183 (need for federal government to rely on states for effective enforcement of prohibition laws).

difficult to accomplish, especially on a national scale.⁶² Also, the possibility of the federal government restructuring the most important institutional addressees of environmental directives—the large business firms and state governmental agencies—appears politically remote and difficult to achieve.⁶³ Thus, given the mounting pressures to act, aspirational mandates directed at institutional addressees, both private and governmental, have been increasingly relied upon to solve the environmental problems confronting the nation.

In the sections which follow, four recent examples of this unusual mode of regulation will be examined and evaluated in light of the preceding analysis. They are: (1) the auto emission reduction provisions in the 1970 and 1977 amendments to title II of the Clean Air Act; (2) the discovery orders and injunctions issued in the *Reserve Mining* litigation; (3) the planning responsibilities of federal agencies under the National Environmental Policy Act of 1969; and (4) the enforcement responsibilities of the states under the 1970 and 1977 amendments to title I of the Clean Air Act. With respect to all four, aspirational commands have failed to achieve the desired goals.

A. *Regulation of Auto Emissions Under the 1970 and 1977 Amendments to the Clean Air Act*

The major provisions of federal law aimed at forcing manufacturers of new automobiles sold in this country to reduce environmentally harmful vehicle emissions are contained in part A of title II of the Clean Air Act as amended.⁶⁴ The 1970 amendments did not specify the control devices required to be installed on motor vehicles, but rather established performance objectives calling for ninety percent reductions by 1975 in hydrocarbon and carbon monoxide emission levels compared with the 1970 levels of emissions for similar vehicles,⁶⁵ and the same percentage reduction in nitrogen oxide emission levels compared with the 1971 levels.⁶⁶ Failure to achieve these reductions would bring fines of up to \$10,000 per nonconforming vehicle sold.⁶⁷ The legislative history of the 1970 amendments indicates that Con-

62. See, e.g., Roberts, *River Basin Authorities: A National Solution to Water Pollution*, 83 HARV. L. REV. 1527 (1970); Russell, *Effluent Changes*, in *ECONOMICS OF AIR AND WATER POLLUTION* 27-55 (W. Walker ed. 1969); Wolozin, *The Economics of Air Pollution: Central Problems*, 33 LAW & CONTEMP. PROB. 227 (1968).

63. Substantial restructuring of business firms would be a practical and political impossibility. Any attempt at federal restructuring of state governments would encounter substantial constitutional problems, see, e.g., *National League of Cities v. Usery*, 426 U.S. 833 (1976), even if the attempt were made through grants-in-aid. See text at note 199 *infra*.

64. The 1970 amendments to part A of title II are codified at 42 U.S.C. §§ 1857f-1 to -8 (1976) (current version at 42 U.S.C.A. §§ 7521-7525, 7541-7547, 7550 (West 1977)). These provisions were further amended in 1974 and 1977. See notes 79-81 *infra*.

65. 42 U.S.C. § 1857f-1(b)(1)(A) (1976) (current version at 42 U.S.C.A. § 7521(b)(1)(A) (West 1977)).

66. 42 U.S.C. § 1857f-1(b)(1)(B) (1976) (current version at 42 U.S.C.A. § 7521(b)(1)(B) (West 1977)).

67. 42 U.S.C. § 1857f-4 (1976) (current version at 42 U.S.C.A. § 7524 (West 1977)).

gress intended to depart from a prior tendency to speak in patently aspirational terms of "encourag[ing] . . . efforts on the part of the automotive and fuel industries to develop devices and fuels to prevent pollutants from being discharged from the exhaust of automotive vehicles,"⁶⁸ and instead to require, under the threat of heavy sanctions, the accomplishment of specifically described emission reductions.

On a first reading, the Act does not appear to be aspirational—that is, it does not appear to require auto companies to cooperate in good faith to attain the emission reductions. Rather, the 1970 amendments established specific performance objectives which the auto companies were commanded to achieve. As will be recalled from the prior discussion, the performance objective approach is effective when the addressor will accept performance levels within the addressee's capability.⁶⁹ Congress, however, was unaware of what reductions could realistically be achieved,⁷⁰ and obviously could not allow the auto industry to set its own objectives, for fear that they would be set too low. Thus, to guard against the very real possibility that the 90 per cent reduction objectives were too high, the Act authorized the Administrator of the Environmental Protection Agency (EPA) to grant a one-year suspension of the reduction requirements to any manufacturer which demonstrated that good faith efforts had failed to produce the necessary control technology.⁷¹ This suspension provision effectively transformed the specific performance objectives into aspirational commands. As observed earlier, because a demonstration of good faith effort will suffice to avoid the threat of sanctions, inclusion of a "He tried his best, but failed" excuse inevitably works such a transformation.⁷²

Experience under title II confirms that the emission reduction program originally established by Congress has been substantially transformed in this manner, and that the sorts of difficulties which one might have expected on the basis of the earlier analysis have been encountered. In June, 1971, the EPA Administrator issued regulations translating the congressional objectives into specific emission standards.⁷³ Early in 1972, the five major motor vehicle manufacturers applied for one-year suspensions of the hydrocarbon and carbon monoxide emission standards. In May, 1972, the Administrator determined that the manufacturers had failed to carry their statutory burden of proving that adequate control technology was not available, and denied the applications.⁷⁴ Thereafter, the United States Court of Appeals for the District of Columbia reversed the Administrator

68. Clean Air Act of 1963, Pub. L. No. 88-206, § 6(a), 77 Stat. 392, 399.

69. See text accompanying notes 46-50 *supra* for a general discussion of the performance objective technique.

70. See note 86 *infra*.

71. 42 U.S.C. § 1857f-1(b)(5)(A)-(E) (1970) (current version at 42 U.S.C.A. § 7521(b)(5)(A)-(C) (West 1977)).

72. See note 50 and accompanying text *supra*.

73. See 36 Fed. Reg. 12,657 (1971).

74. Applications for Suspension of 1975 Motor Vehicle Emission Standards, Decision of the Administrator, 37 Fed. Reg. 15,193 (1972).

and remanded the case for further consideration.⁷⁵ The court concluded that, notwithstanding language in the Act purporting to place the burden of proof upon the manufacturers, "the Administrator must sustain the burden of adducing a reasoned presentation supporting the reliability of EPA's methodology."⁷⁶ In effect, the Administrator was required to demonstrate how adequate technology would become available in time to meet the deadlines before he could reject the manufacturers' contentions to the contrary. The risks of an improper granting of a suspension were perceived to be outweighed by the costs of an improper denial, and the court refused to impute to Congress the intent to play such a high stakes game in a "hard nosed" fashion.⁷⁷

On remand, the Administrator granted the suspension and imposed interim emission standards more lenient than the ninety percent reductions required in the Act.⁷⁸ Subsequently, Congress amended title II to postpone the final compliance deadlines until 1977-78, and to allow manufacturers to petition for another one-year suspension.⁷⁹ In March, 1975, in response to petitions brought under these amendments, the Administrator suspended the emission standards for hydrocarbons and carbon monoxide, due to take effect in 1977, for one year.⁸⁰ In 1977, Congress again amended title II, this time to postpone the final compliance deadlines until 1981.⁸¹ These most recent amendments provide for the step-wise accomplishment of emission reductions in the years 1977-79, 1980, and 1981, and include limited opportunities for manufacturers to obtain waivers of emission standards.⁸² Thus, the 1975 deadline originally imposed upon the manufacturers has been extended for at least six years, with no guarantee that further extension will not occur.

Commentators upon these developments have offered a variety of explanations for the failure to achieve the statutorily imposed auto emission objectives, typically accompanied by expressions of frustrated disappointment. Some have taken the view that Congress destined emission control efforts to defeat by combining foolishly stringent emission standards with sanctions so unrealistically severe that it was apparent from the outset they would never be imposed.⁸³ Other writers have argued that the court of

75. *International Harvester Co. v. Ruckelshaus*, 478 F.2d 615 (D.C. Cir. 1973).

76. *Id.* at 648.

77. *Id.* at 649.

78. Applications for Suspension of 1975 Motor Vehicle Emission Standards, Decision of the Administrator, 38 Fed. Reg. 10,317, 22,474 (1973).

79. Energy Supply and Environmental Coordination Act of 1974, Pub. L. No. 93-319, § 5, 88 Stat. 258 (codified at 42 U.S.C. § 1857f-1 (1976)).

80. Applications for Suspension of 1977 Motor Vehicle Exhaust Emission Standards, Decision of the Administrator, 40 Fed. Reg. 11,900 (1975).

81. Clean Air Act Amendments of 1977, Pub. L. No. 95-95, 91 Stat. 686, 687 (codified at 42 U.S.C.A. §§ 7401-7642 (West 1977)).

82. 42 U.S.C.A. § 7521 (West 1977).

83. The authors of a provocative critique of federal emission control efforts liken these sanctions to "the hydrogen bomb—too damaging for use against moderate provocations." Jacoby & Steinbruner, *Salvaging the Federal Attempt to Control Auto Pollution*, 21 PUB. POL'Y 1, 3 (1973).

appeals weakened the federal regulatory efforts by placing unrealistic burdens of proof upon the EPA to demonstrate the availability of control technology.⁸⁴ Still others have insisted that federal pollution control objectives have been frustrated by the unwillingness of Congress to authorize sufficiently severe criminal penalties against corporate management.⁸⁵

This Article's analysis of the limits of aspirational commands suggests a more basic explanation for the delays, one which, to some extent at least, regards the frustration of congressional intent as unavoidable under the circumstances. It was fairly clear from the outset that the technology necessary to achieve conformance to the standards did not exist at the time of their promulgation and that the federal government itself lacked sufficient technical expertise to determine with any specificity the steps which should be taken to reduce emissions.⁸⁶ Thus, the Act imposing the ninety percent reduction requirements was "technology forcing" in that it assigned to the auto manufacturers the obligation to develop the necessary control technology under the threat of heavy sanction.⁸⁷ Given the necessary severity of the threatened sanctions and the unavoidable uncertainties surrounding the question of whether the congressionally imposed objectives could be reached, a safety valve—the one-year suspension provision—was necessary. But with this provision the regulatory scheme of setting specific performance objectives was inevitably transformed into a scheme calling for the manufacturers' best efforts, under which the manufacturers' values would substantially dictate the course of technology development.

The inevitability of the frustration of congressional hopes is suggested by the reaction of the court of appeals to the manufacturers' appeal from the Administrator's denial of their suspension applications under the 1970

84. See, e.g., Comment, *The Automobile Controversy—Federal Control of Vehicular Emissions*, 4 *ECOLOGY L.Q.* 661, 667-68 (1975).

85. Clearly, the amendments to the Clean Air Act since 1970 have contemplated that manufacturing corporations, rather than corporate management will be liable for the fines imposed in part A of title II relating to the first sale or delivery of new vehicles. These fines are imposed upon "[a]ny person who violates paragraph (1) . . . of section 7522(a) of this title . . ." 42 U.S.C.A. § 7524 (West 1977). The section referred to, however, prohibits the sale or introduction into commerce of vehicles which do not meet prescribed emission standards, if done by a "manufacturer." See 42 U.S.C.A. § 7522(a)(1) (West 1977). Thus, the only "person" who can violate this prohibition is a corporation. For an analysis urging that corporate management be held liable criminally for acts knowingly contributing to environmental pollution, see Comment, *The Criminal Responsibility of Corporate Officials for Pollution of the Environment*, 37 *ALB. L. REV.* 61 (1972). For a similar suggestion in the context of the 1970 amendments to title II of the Clean Air Act, see Ditlow, *Federal Regulation of Motor Vehicle Emissions Under the Clean Air Amendments of 1970*, 4 *ECOLOGY L.Q.* 495, 508 (1975).

86. It is obvious that the 90% reduction requirements were reached by a process of reasoning backwards from presumed health-based standards, and do not reflect a congressional judgment regarding what might actually be accomplished. See Gubrud, *The Clean Air Act and Mobile-Source Pollution Control*, 4 *ECOLOGY L.Q.* 523, 526-28 (1975).

87. Senator Muskie, a chief proponent of the measure, characterized these provisions as "drastic medicine." 116 *CONG. REC.* 32,904 (1970). In a newspaper report introduced into the record by Senator Muskie, Senator Eagleton was quoted as stating, "I am trying to force the state of the art." *Id.* at 33,120. Senator Griffin asserted: "[T]his bill . . . introduces a novel concept to automotive emission control—the concept of brinkmanship. An industry pivotal to the U.S. economy is to be required by statute to meet standards which the committee itself acknowledges cannot be met with existing technology." *Id.* at 33,080.

legislation. Given the vagueness of the suspension provision,⁸⁸ the Administrator could not make an independent determination of whether the manufacturers had acted in good faith, and thus could not rebut their insistence that they had tried their best and failed. To be sure, the Administrator could have played a hunch in denying the suspension applications, or he could have assumed a deliberately irrational posture and thereby bluffed the manufacturers into believing he was insane enough to carry the country over the brink of economic disaster.⁸⁹ But the court could not allow itself either to play hunches or to feign insanity. Congressional sponsors of the 1970 amendments may have believed that, by purporting to place the burden of proof on the manufacturers, they had provided a safety valve which would only be used when control technology was "really and truly" not available.⁹⁰ Such a belief, although no doubt sincere, was unrealistic, given the manufacturers' control over the development of the needed technology.

In addition to the Act's failure to achieve its pollution reduction goals, several other important and possibly counterproductive consequences flowed from its suspension provision approach. The situation confronting Congress in this context was essentially a tragedy of the commons⁹¹—the auto companies, in competition with one another, had been using the ambient air as a commons, designing their engines upon the premise that the costs associated with auto emissions could almost totally be externalized. As a result, it soon became obvious that the companies which would be hurt the most severely by the granting of a last minute suspension would probably be those which took the emission requirements most seriously and went to great expense in attempts to meet them, since the competitive position of those companies would be compromised. The public record makes clear that this implication was not lost on the parties most directly affected by this approach to auto emission controls.⁹²

88. The Administrator shall grant such suspension only if he determines that (i) such suspension is essential to the public interest or the public health and welfare of the United States, (ii) all good faith efforts have been made to meet the [emission] standards established by this subsection, (iii) the applicant has established that effective control technology, processes, operating methods, or other alternatives are not available or have not been available for a sufficient period of time to achieve compliance prior to the effective date of such standards

42 U.S.C. § 1857f-1(b)(5)(C) (1976).

89. Former EPA Administrator Ruckelshaus explains his use of this tactic in this way: "I started out with a fairly arbitrary stance that must have appeared to be very unreasonable, if not irrational, to a lot of the people I was regulating [I]f some of the things I said struck them as just a little bit irrational, I thought that would stimulate them more than anything else I could do. So, I would purposely from time to time make statements that went over the edge." 3 William Ruckelshaus & EPA, Preliminary Draft of Teaching Materials, Public Policy Program at the Kennedy School of Government, Harvard University 12 (1974) (copy on file with the authors).

90. Senator Muskie explained his views of the suspension provisions in this manner: "We wanted the provision for appeal to be made available late enough in this 5-year time frame so that the industry would make, and be forced to make, a good faith effort toward achieving the objectives of the bill before resorting to the courts." 116 Cong. Rec. 33,087 (1970).

91. See notes 56-57 and accompanying text *supra*.

92. In *International Harvester Co. v. Ruckelshaus*, 478 F.2d 615 (D.C. Cir. 1973), the court observed: "This case is haunted by the irony that what seems to be Ford's technological lead may operate to its grievous detriment, assuming the [adoption of a] relaxation-if-necessary approach" *Id.* at 637 (footnote omitted).

This suspension provision approach also may have worked to undercut the technology forcing aspects of the auto emission provisions in another way. Given the reality that the most convincing way for the manufacturers to demonstrate good faith when applying for a suspension would be to show some effort coupled with some progress toward the stated objectives, it was inevitable that the transformation of the stringent reduction requirements into aspirational commands would, in turn, be transformed into the now familiar pattern of incremental emission reductions followed by periodic suspensions of the more drastic requirements. Although congressional sponsors of the amendments were concerned with minimizing the possibility that the suspension provision might undermine the technology forcing effects of title II,⁹³ such undermining could have been avoided only by the politically and logically unacceptable alternative of eliminating any chance for a suspension.

Most critics have attempted to explain the failure of the amendments to title II by suggesting that Congress should have enacted better enforcement mechanisms. These explanations are inadequate, since they focus upon the means of enforcement rather than upon the aspirational nature of the commands. For example, would it have made a substantial difference, as some have suggested,⁹⁴ if the sanctions for noncompliance had been less severe? To answer this question, one must ask another: How much less severe? An intelligent answer to this question requires the sorts of data which Congress lacked—*i.e.*, reliable data concerning not only the externalized costs of the pollution caused by various motor vehicles but also the costs of developing and maintaining a reasonable emission control system.⁹⁵ Had these data been available, Congress arguably would have possessed the expertise necessary to tell the manufacturers specifically what to do, and drastic performance objectives would not have been necessary. Lacking the data, Congress had to threaten sanctions that would hurt if they were imposed. That Congress fixed upon a fine of up to \$10,000 per nonconforming vehicle sold, instead of \$5,000 or \$1,000, is beside the point. Assuming the sanctions were severe enough to hurt, Congress had to provide a safety valve to cover the very real possibility that the ninety percent reductions were unattainable; and once the safety valve was provided, the limited efficacy of aspirational commands came into play to defeat the attainment of these reduction objectives.

One of the most interesting explanations of the auto manufacturers' failure to achieve the emission reduction objectives suggests that the manu-

93. See 116 CONG. REC. 32,920-21 (1970).

94. See note 83 and accompanying text *supra*.

95. When a decision is reached that a specific emission control device is to be required by law, fines for noncompliance can effectively be established at levels equal to, or slightly in excess of, the costs of compliance. See, *e.g.*, 1 CONNECTICUT ENFORCEMENT PROJECT, ECONOMIC LAW ENFORCEMENT (1975). Section 118 of the Clean Air Act Amendments of 1977 provides for this same technique in connection with civil penalties for noncompliance by stationary sources. See 42 U.S.C.A. § 7420(d)(2) (West 1977).

facturers somehow sabotaged the achievement of those objectives, and that the imposition of more severe criminal penalties on corporate management would have gone a long way toward hastening the development of control technology.⁹⁶ It is possible, of course, that auto company management have to some extent deliberately set about to frustrate the development of control technology. Indeed, the ability of addressees to dissemble in response to aspirational commands is one of the basic tenets supporting the present analysis,⁹⁷ and there is evidence that this has occurred in response to federal efforts to reduce auto emissions.⁹⁸ However, it will be recalled that an equally serious problem is presented by the characteristic vagueness of such commands, especially where, as in this instance, the addressees are hierarchically organized business firms.⁹⁹ For example, when an American auto manufacturer is told by Congress, in effect, to try its best to achieve a ninety percent reduction in hydrocarbon emissions, inevitably this message is accompanied by a number of unstated, but very real and necessary, qualifications—e.g., without unnecessary or unreasonable dislocation costs, and without drastic reductions in engine efficiency. (Indeed, it is only on the assumption that qualifications of this sort accompany the command to reduce emissions that any technological problem is presented.¹⁰⁰) In effect, Congress wanted to achieve maximum emissions reduction with a minimum disruption in “business as usual.” It follows that in interpreting and reacting to such a command, an addressee must make value judgments as well as technical judgments. And the value judgments of a bureaucratic organization inevitably reflect its own built-in values, rather than those sought to be imposed upon it from the outside. Therefore, whether or not the executive officers of an American auto company engage in clandestine efforts to thwart the development of control technology, the company as a bureaucracy cannot be made to alter significantly the direction and momentum of its activities by vague, aspirational commands.¹⁰¹ This will be especially true in situations such as this, where conformance to the aspirational commands would put the addressee at a distinct competitive disadvantage.¹⁰² However much it might assuage the moral outrage which some environmentalists understandably feel when confronted with apparent footdragging on the part of corporate polluters, imposing criminal sanctions upon management based upon an inference of deliberate sabotage drawn from the mere fact of non-

96. See note 85 *supra*.

97. See text accompanying notes 23-25 *supra*.

98. For example, the major American auto manufacturers were defendants in a Justice Department antitrust suit alleging a conspiracy to delay and obstruct development of motor vehicle pollution control equipment. *United States v. Automobile Mfrs. Ass'n*, 307 F. Supp. 617 (C.D. Cal. 1969), *aff'd per curiam*, 397 U.S. 248 (1970). The action ended in a consent decree. See *Hearings on S. 3229, S. 3466, S. 3546, Before the Subcomm. on Air and Water Pollution of the Senate Comm. on Public Works*, 91st Cong., 2d Sess. 1682-95 (1970).

99. See text accompanying notes 26-34 *supra*.

100. Thus, the present levels of auto emissions could be reduced by nearly 100% by shifting to foot pedal power.

101. See text accompanying notes 29-34 *supra*.

102. See notes 56-57 *supra* and text accompanying notes 90-91 *supra*.

accomplishment would do little to change the just-described bureaucratic reality.

That some motor vehicle emission reductions have been achieved in recent years in response to the requirements of the Clean Air Act¹⁰³ detracts from neither the validity nor the utility of this analysis. Clearly, the fact that reductions have occurred does not support a conclusion that manufacturers have aspired to solve the problem of controlling air pollution caused by motor vehicles. More importantly, it is not clear whether the reductions which have been achieved actually constitute substantial progress.

Earlier, the pattern of incremental emission reductions followed by periodic suspensions of more drastic reduction requirements was observed as a more or less inevitable consequence of the aspirational scheme of regulation of title II of the Clean Air Act. Whatever the short run benefits from such an incremental approach, they may be offset by harm caused to long range pollution control efforts. Thus, it may be argued that what has been required to achieve substantial reductions in motor vehicle emissions has been creative long range planning to arrive at acceptable alternatives to the gasoline powered internal combustion engine.¹⁰⁴ To succeed in demonstrating good faith reduction efforts under title II of the Clean Air Act, however, auto manufacturers have been compelled to achieve periodic incremental reductions on a short run basis. To achieve these reductions, they have been required to retain their basic engine design and to be content with relatively superficial, "bolt-on" tinkering.¹⁰⁵ To be sure, some research toward developing basic alternatives to the traditional engine may be taking place.¹⁰⁶ The Clean Air Amendments of 1970 provided for federal support for such research.¹⁰⁷ But the federal funding has been insubstantial,¹⁰⁸ and from the companies' competitive viewpoint these efforts are tangential to their core enterprise.¹⁰⁹ Indeed, a commitment to such basic research might actually interfere with the efforts being made to meet the short run emission requirements. As a result, it can be argued that the emission reductions up to now, and even ultimate compliance by the early 1980's, will in fact have

103. See N.Y. Times, Dec. 22, 1977, at 41, col. 5. See also 6 NATIONAL RESEARCH COUNCIL, IMPLICATIONS OF ENVIRONMENTAL REGULATIONS FOR ENERGY PRODUCTION AND CONSUMPTION 86 (1977).

104. See generally Jacoby & Steinbruner, *supra* note 82.

105. *Id.* at 2. See also La Pierre, *supra* note 60, at 796.

106. See, e.g., *Car Engines That Are Really Different*, U.S. NEWS & WORLD REP., June 28, 1976, at 66-67.

107. 42 U.S.C. § 1857b-1 (1976) (current version at 42 U.S.C.A. § 7404(a) (West 1977)). The long run shortage of petroleum as a fuel is also, of course, a factor in the development of alternatives to the internal combustion engine.

108. Although Congress authorized 400 million dollars for research over a five-year period in 1976, see *Car Engines That Are Really Different*, *supra* note 106, at 66, col. 2, "there is still a sizeable body of opinion in the auto industry which holds that the [internal combustion engine] will continue to dominate until or unless outside circumstances dictate otherwise." *Id.* at 67, col. 3.

109. The auto industry is engaging in some basic research into possible replacements for the internal combustion engine, but primarily out of concern over the energy problem. The Department of Energy has also provided modest funding for research. See N.Y. Times, May 17, 1978, § D, at 6, col. 3.

impeded the chances for long range progress by increasing the reliance upon, and the commitment of resources to, the traditional internal combustion engine.¹¹⁰ Thus, Congress's attempt to use aspirational commands to achieve reductions in automotive emissions has generally been unsuccessful and may even have been counterproductive.

B. *The Reserve Mining Litigation*

In the preceding section, the aspirational commands were contained in federal statutes. This portion of the Article considers such commands as they emanated from the federal judiciary in a nuisance action brought to enjoin environmentally harmful conduct. These commands fall into two basic categories: discovery orders issued during trial to redress imbalances between the parties' relative access to technical data, and injunctions issued at trial's end to afford relief to successful plaintiffs. The federal district court decision in *United States v. Reserve Mining Co.*¹¹¹ epitomizes the sorts of difficulties likely to be encountered when courts rely upon both types of aspirational commands.

In the summer of 1972, the United States and others¹¹² brought an action against Reserve Mining Company (Reserve) in the United States District Court for Minnesota to enjoin the company from discharging taconite tailings, waste materials from its mining operation, into Lake Superior. The plaintiffs alleged that the defendant's activities violated the Federal Water Pollution Control Act,¹¹³ and the Federal Refuse Act,¹¹⁴ and constituted a public nuisance under federal common law.¹¹⁵ Plaintiffs claimed that these waste materials contained asbestos-like amphibole fibers which exposed surrounding communities to significant health hazards. Reserve denied the allegations, and further maintained that the injunction sought by the plaintiffs would require it to shut down its operations and would threaten a substantial work force with economic hardship.¹¹⁶ After a lengthy trial the district court made findings and conclusions favorable to the plaintiffs and ordered Reserve to cease the discharges immediately. Concluding that the defend-

110. See Jacoby & Steinbruner, *supra* note 83, at 2, 8.

111. 380 F. Supp. 11 (D. Minn. 1974). The subsequent litigation in this and related cases has been extensive, including dozens of reported decisions in federal and state courts. For a recent summary of the litigation, see *Reserve Mining Co. v. Herbst*, — Minn. —, 256 N.W.2d 808 (1977).

112. The states of Minnesota, Michigan, and Wisconsin were made parties plaintiff and Reserve's corporate parents were joined as defendants. Public interest groups on both sides were permitted to intervene. See 380 F. Supp. at 21-23.

113. 33 U.S.C. §§ 1151-1175 (1976). Specifically, Reserve's discharge was alleged to be in violation of water quality standards referred to as Minnesota Regulation WPC 15(a)(4), (c)(2), (c)(6). 380 F. Supp. at 23.

114. 33 U.S.C. § 407 (1976).

115. See, e.g., *Illinois v. City of Milwaukee*, 406 U.S. 91 (1972). See generally Note, *Federal Common Law and Interstate Pollution*, 85 HARV. L. REV. 1439 (1972).

116. The work force potentially affected by a shutdown numbered approximately 3,000. The district court noted that it "would be the first to agree that the work force of Reserve would suffer immensely if the plant is shut down and they are thrown out of work." 380 F. Supp. at 70. The court, however, went on to insist that such dislocations could be minimized were the defendant to develop a middle ground abatement process. *Id.* at 70 n.52, 87-88.

ant's activities substantially endangered the exposed population, and observing that Reserve had steadfastly refused to cooperate in working out a middle ground solution, the district court stated that it had no alternative but to order defendants to shut down their disposal operations.¹¹⁷

From the outset, it was apparent to the court that forcing the defendants to shut down would visit severe economic dislocation upon a substantial number of persons who relied upon Reserve, directly or indirectly, for their livelihoods. It was also clear that, if the plaintiffs' medical experts were to be believed, Reserve's operations exposed substantial numbers of persons to serious, long range health hazards.¹¹⁸ As the district court recognized, it was imperative that a middle ground solution be worked out if the very difficult choice between the extremes of shutting down entirely or continuing to conduct business as usual were to be avoided.¹¹⁹ The only party to the proceedings possessing sufficient technical expertise to work out a solution was Reserve itself. Reserve, however, discounted the accuracy of the plaintiffs' medical evidence, and saw no advantage in cooperating voluntarily in developing alternative waste disposal methods which would add substantially to its operating costs. As Reserve must have viewed the situation, it was unlikely that the plaintiffs would be able to present workable alternatives on their own and, absent such alternatives, it was unlikely that the federal courts would order Reserve to shut down.

Thus, the district court faced the dilemma of the governmental regulator confronting potentially life-threatening, but economically important, applications of industrial technology. To choose either extreme of shutting down or permitting business as usual appears untenable, but middle ground alternatives can only be developed by somehow compelling the regulatee to cooperate in their development. The district court's efforts to compel the defendant's cooperation in this case took the form of discovery orders aimed at pressuring Reserve to develop alternative methods of waste disposal.¹²⁰ Consistent with the preceding analysis of the limits of aspirational

117. *Id.* at 71.

118. The district court found that "[t]he discharge into the water substantially endangers the health of the people who procure their drinking water from the western arm of Lake Superior including the communities of Beaver Bay, Two Harbors, Cloquet, Duluth, and Superior, Wisconsin." *Id.* at 16. The health risk referred to was the risk of contracting cancer. *See id.* at 39-54.

119. *Id.* at 17-18. Because the aspirational commands in *Reserve Mining* emanated from a court, additional difficulties arising from the inherent limits upon adjudication as a method of solving complex technological problems were necessarily encountered. *See generally* Henderson, *Expanding the Negligence Concept: Retreat from the Rule of Law*, 51 *IND. L.J.* 467, 484-501 (1976). In such a case, the judge inevitably is pressured to assume the role of planner and manager, relying less upon rules of law than upon hunch and intuition. *Reserve Mining* presented complex technological issues and the stakes were high. That the district judge succumbed to the pressures to abandon the traditional judicial role was recognized by the court of appeals in the decision to remove the district judge from the case. *See Reserve Mining Co. v. Lord*, 529 F.2d 181, 185-86, 188 (8th Cir. 1976).

120. The district court's description of these discovery orders appears in 380 F. Supp. at 65-69. These orders were not expressly couched in aspirational terms, but instead called for disclosure of existing plans and documents. It is clear from the district court's opinion, however, that they were part of the district judge's efforts to pressure defendants to cooperate.

commands, these efforts failed. The court's frustration over its helplessness to prevent this failure is clearly reflected in its opinion:

After listening to testimony for over nine months the Court has formed the opinion that the credibility of the defendants collectively in this case is seriously lacking. They have misrepresented matters to the Court, they have produced studies and reports with obvious built-in bias, they have been particularly evasive when officers and agents were cross examined.

. . . .

. . . . It is interesting to note that although the defendants claimed that the calcium situation was a problem that precluded them from developing an on land system of disposal and although they had at their disposal over 400 chemists, they had conducted no engineering studies in an effort to solve the problem. . . . It is interesting to note that within three days of March 1, when Reserve's hidden secret documents were exposed in open court, they were able to develop [an] on land disposal system for the tailings. . . .

. . . [T]he nature of the defendant's conduct causes the Court to closely examine every statement made by the defendants as well as every representation to assure the Court of the factual basis to support such statement or representation.

. . . At the culmination of the trial, after all of the discoveries of the actual ability of defendants to implement an on land disposal system, the chief executives . . . were directly asked by the Court if they would abate the public health problem, and implement a program for on land disposal . . . The answer to the question posed by the Court was no. . . . At this point the Court has only two alternatives. . . . [T]here is no middle ground.¹²¹

As these excerpts suggest, revelations during the trial supplied the basis for a later district court order requiring defendants to pay \$200,000 of plaintiffs' attorneys fees for having contributed to delay in the trial by misrepresenting to the court that certain tentative plans, which had been substantially developed prior to trial, did not exist.¹²² But with respect to the broader question of developing a workable on-land disposal alternative, the court's efforts to compel defendants to cooperate in good faith were almost certainly bound to fail. In a manner reminiscent of the stance of Congress with respect to the reduction of auto emissions,¹²³ the district court in this case was asking Reserve to behave less competitively, in the interests of the public welfare. Indeed, within the peculiar context of a lawsuit, the court was asking a litigant to behave less litigiously.¹²⁴ That

121. 380 F. Supp. at 64, 68-69.

122. *United States v. Reserve Mining Co.*, 412 F. Supp. 705 (D. Minn. 1976).

123. See text accompanying notes 91-92 *supra*.

124. For the suggestion that litigants should behave less litigiously in analogous cases involving technically complex questions of products liability by no longer adopting the polar positions of adversaries, see Twerski, Weinstein, Donaher & Piehler, *The Use and Abuse of*

Reserve failed to respond affirmatively to either of these demands is hardly surprising.

The order of the district court enjoining Reserve's operations was modified by the court of appeals to allow the company time to develop an alternative disposal system.¹²⁵ Given the fact that the court of appeals must have known even less about feasible alternatives than did the district court, it is not surprising that its stay of the injunction was couched in patently aspirational terms:

Reserve shall be given a reasonable time to stop discharging its wastes into Lake Superior. A reasonable time includes the time necessary to . . . come to agreement on some other site acceptable to both Reserve and the state. . . . Upon receiving a permit from the State of Minnesota, Reserve must utilize every reasonable effort to expedite the construction of new facilities. . . . If at any time during negotiations between Reserve and Minnesota for a disposal site, the United States reasonably believes that Minnesota or Reserve is not proceeding with expedition to facilitate Reserve's termination of its water discharge, it may apply to the district court for any additional relief necessary to protect its interests.¹²⁶

Consistent with the pattern observed earlier in connection with congressional attempts to abate motor vehicle emissions, grudging progress towards accomplishing a middle ground compromise has been made since the issuance of that order.¹²⁷ According to the latest district court decision in this case, Reserve will be allowed until 1980 to build an on-land disposal system.¹²⁸ At least until that date, Reserve will continue dumping its wastes in Lake Superior notwithstanding the district court's finding that "[t]he discharge into the water substantially endangers the health of the people who procure their drinking water from the [lake]."¹²⁹ Thus, the court's attempts to force Reserve to aspire to alleviate the problem have not yet yielded lasting benefits.

C. *The Responsibilities of Federal Agencies Under the National Environmental Policy Act of 1969*

The National Environment Policy Act of 1969 (NEPA)¹³⁰ provides a unique opportunity to examine the effectiveness of aspirational commands in

Warnings in Product Liability—Design Defect Litigation Comes of Age, 61 CORNELL L. REV. 495, 535-36 (1976). For a critical commentary on the suggestion, see Henderson, *Design Defect Litigation Revisited*, 61 CORNELL L. REV. 541, 551-55 (1976).

125. *Reserve Mining Co. v. EPA*, 514 F.2d 492 (8th Cir. 1975).

126. *Id.* at 538.

127. A summary of progress to date appears in *Reserve Mining Co. v. Herbst*, — Minn. —, 256 N.W.2d 808 (1977). In effect, the courts are pressuring Reserve and the state of Minnesota to work out a compromise solution. See text accompanying note 126 *supra*.

128. *United States v. Reserve Mining Co.*, 431 F. Supp. 1248 (D. Minn. 1977).

129. 380 F. Supp. at 16.

130. 42 U.S.C. §§ 4331-4335, 4341-4344 (1976).

the context of intragovernmental relationships. The provisions of NEPA relevant to the present analysis are section 101, which imposes in patently aspirational terms the "substantive" requirement that federal agencies weigh environmental values in their decisionmaking,¹³¹ and section 102, which imposes the "procedural" or "action-forcing" requirement that agencies prepare Environmental Impact Statements (EIS's) in connection with proposals for federal action significantly affecting the human environment.¹³² Prior to the Act, courts had occasionally interpreted federal regulatory statutes to impose such obligations,¹³³ but with NEPA, Congress explicitly extended this responsibility to all federal agencies. The hope expressed by some of NEPA's sponsors that the Act, though aspirational, would have its intended effect upon agency decisionmaking¹³⁴ was based upon two assumptions: first, that NEPA's aspirational commands would be understood by the agencies; and second, that political and budgetary leverage would provide sanctions sufficient to compel compliance.¹³⁵

To the extent that the substantive provisions of NEPA constitute aspirational mandates, however, their implementation could be expected to encounter the same difficulties as have been observed in connection with similar mandates directed at business firms. In fact, governmental bureaucracies might be expected to be more resistant to change than would be addressees in the private sector.¹³⁶ Certainly the agencies compete with one another for scarce budgetary resources, and to comply with NEPA's substantive requirements might cause some agencies to experience disruptions which could place them at a competitive disadvantage.¹³⁷ Moreover, the vague substantive mandates of NEPA¹³⁸ could be interpreted as seeking, in

131. The section provides in pertinent part that:

it is the continuing responsibility of the Federal Government to use all practicable means, consistent with other essential considerations of national policy, to improve and coordinate Federal plans, functions, programs, and resources to the end that the Nation may—

“(2) assure for all Americans safe, healthful, productive, and esthetically and culturally pleasing surroundings.

42 U.S.C. § 4331(b) (1976).

132. The section requires: “[T]o the fullest extent possible . . . all agencies of the Federal Government shall— . . . (c) include in every recommendation or report on proposals for legislation and other major Federal actions significantly affecting the quality of the human environment, a detailed statement . . . on—(i) the environmental impact of the proposed action.” 42 U.S.C. § 4332 (1976).

133. *E.g.*, *Citizens to Preserve Overton Park, Inc. v. Volpe*, 401 U.S. 402 (1971) (agency action taken prior to the effective date of NEPA); *Scenic Hudson Preservation Conf. v. FPC*, 354 F.2d 608 (2d Cir. 1965), *cert. denied*, 384 U.S. 941 (1966).

134. *See, e.g.*, Caldwell, *Authority and Responsibility for Environmental Administration*, 329 ANNALS 107, 112 (1970).

135. *See Hearings on S. 1075, S. 237 and S. 1752 Before the Senate Comm. on Interior and Insular Affairs*, 91st Cong., 1st Sess. 32 (1969). *See also* Cortner, *A Case Analysis of Policy Implementation: The National Environmental Policy Act of 1969*, 16 NAT. RESOURCES J. 323, 327-28 (1976).

136. *See* Drucker, *What Results Should You Expect? A Users' Guide to MBO*, 36 PUB. AD. REV. 12 (1976).

137. *See generally* Cortner, *supra* note 135.

138. *See* note 131 *supra*.

a manner similar to the vehicle emission reduction provisions of the Clean Air Amendments of 1970,¹³⁹ only so much change as could be accomplished without costly disruptions in agency "business as usual." Thus, the agencies could be expected to implement NEPA's substantive provisions in ways conforming to, rather than departing from, their traditional orientations and standard operating procedures.¹⁴⁰ To be sure, section 102's action-forcing procedural requirement¹⁴¹ that agencies prepare EIS's could be expected to produce more definite patterns of agency response.¹⁴² But unless the courts would be willing to review agency action on its merits, the utility of a statute that only imposed the obligation to prepare a statement would seem doubtful.¹⁴³

A review of judicial and agency responses reveal patterns consistent with the foregoing analysis. The action-forcing provisions of section 102 have received most of the emphasis in legal actions brought under NEPA, and the duties imposed by that section have been interpreted as being essentially mechanical and nonaspirational.¹⁴⁴ Courts have required agencies to prepare EIS's in a broad range of cases, and a number of proposals for action by federal agencies have been delayed by injunctions pending their preparation.¹⁴⁵ Over the objections of environmentalists, courts have considered the EIS mechanism to be procedural in nature,¹⁴⁶ and have not

139. 42 U.S.C. §§ 1857f-1 to -8 (1976) (current version at 42 U.S.C.A. §§ 7521-7550 (West 1977)).

140. See notes 30-34 and accompanying text *supra*.

141. 42 U.S.C. § 4332 (1976).

142. NEPA's main congressional sponsor, Senator Jackson, is generally recognized to be the primary source of the "action-forcing" concept in congressional debate. See 115 CONG. REC. 40,416 (1969). See generally Hanks & Hanks, *An Environmental Bill of Rights: The Citizen Suit and the National Environmental Policy Act of 1969*, 24 RUTGERS L. REV. 230, 251-65 (1970).

143. See text accompanying notes 47-50 *supra*.

144. In one of the leading cases interpreting NEPA's substantive and procedural mandates, Calvert Cliffs Coordinating Comm., Inc. v. AEC, 449 F.2d 1109 (D.C. Cir. 1971), the court explained:

Thus, the general substantive policy of the Act is a flexible one. It leaves room for a responsible exercise of discretion and may not require particular substantive results in particular problematic instances. However, the Act also contains very important "procedural" provisions—provisions which are designed to see that all federal agencies do in fact exercise the substantive discretion given them. These provisions are not highly flexible. Indeed, they establish a strict standard of compliance.

Id. at 1112. By and large, the courts have followed this approach. See, e.g., *City of New York v. United States*, 344 F. Supp. 929 (E.D.N.Y. 1972); *Daly v. Volpe*, 326 F. Supp. 868, 870 (W.D. Wash. 1971). Occasionally a court will purport to review the substantive merits of an agency decision. See, e.g., *Environmental Defense Fund, Inc. v. Corps of Eng'rs of the United States*, 470 F.2d 289, 297-300 (8th Cir. 1972). The relatively narrow scope of judicial review in such cases assures that the level of the courts' participation in decisions on the merits remains minimal, however.

145. See, e.g., *Hanly v. Kleindienst*, 471 F.2d 823 (2d Cir. 1972), *cert. denied*, 412 U.S. 908 (1973); *Greene County Planning Bd. v. FPC*, 455 F.2d 412 (2d Cir.), *cert. denied*, 409 U.S. 849 (1972); *San Antonio Conservation Soc'y v. Texas Highway Dep't*, 446 F.2d 1013 (5th Cir. 1971), *cert. denied*, 406 U.S. 933 (1972).

146. See, e.g., Hanks & Hanks, *supra* note 142; Sax, *The (Unhappy) Truth About NEPA*, 26 OKLA. L. REV. 239 (1973); Note, *Tilting at the Environmental Windmill—The Quest for a Substantive Right to a Clean Environment*, 9 SUFFOLK U.L. REV. 1286 (1975); Note, *NEPA: Full of Sound and Fury . . .*, 6 U. RICH. L. REV. 116 (1971).

undertaken to review the proposals for agency action to which the EIS's relate on their substantive merits.¹⁴⁷

Whether NEPA has affected agency attitudes and conduct beyond the direct effects of the judicially enforced EIS requirements is more difficult to determine. Some analysts, emphasizing the gradual, indirect effects of being forced to conform to the procedural requirements of section 102, have concluded that the Act has had a limited, but measurable, impact upon agency behavior.¹⁴⁸ On the other hand, studies focusing upon the effects of NEPA at the agency policymaking level have tended to be more pessimistic.¹⁴⁹ For example, one writer has concluded:

When a new policy does not demand changes in the agencies' established structural and behavior characteristics, implementation is apt to be facilitated. NEPA, however, demands change. It requires modifications in a number of variables which are rooted in the organizations' basic structure and its established patterns of action. To implement NEPA effectively, agencies would have to become committed to innovative behavior and would have to make alterations in their internal value configurations. Such behavior is too risky for the agencies; resistance and opposition have been the safer course.¹⁵⁰

On balance, studies of NEPA's substantive effects upon agency decision-making are supportive of the conclusions reached earlier regarding the limited effectiveness of aspirational commands. Analysts have been unhappy with the limited, predominantly procedural effects of the Act, and have expressed their frustration in terms which, though failing to recognize the extent to which the failure of NEPA's substantive mandates was inevitable from the outset, are consistent with the basic analysis in this Article.¹⁵¹

Perhaps the clearest indication that the difficulties in achieving NEPA's substantive policy objectives are inherent in the Act's reliance upon aspira-

147. See *Kleppe v. Sierra Club*, 427 U.S. 390, 410 n.21 (1976). See also note 144 *supra*. Obviously, an important part of the explanation of judicial reluctance to address the substantive merits in these cases relates to the limits of adjudication. See note 119 *supra*.

148. See, e.g., Wichelman, *Administrative Agency Implementation of the National Environmental Policy Act of 1969: A Conceptual Framework for Explaining Differential Response*, 16 NAT. RESOURCES J. 263 (1976). See also U.S. DEP'T OF COMMERCE, PUB. NO. PB-253990, *AN ANALYSIS OF SIX YEARS' EXPERIENCE BY SEVENTY FEDERAL AGENCIES* 21-26 (1976) [hereinafter cited as *SIX YEARS' EXPERIENCE*].

149. See, e.g., Andrews, *Agency Responses to NEPA: A Comparison and Implications*, 16 NAT. RESOURCES J. 301 (1976); Cortner, *supra* note 135; Fishman, *A Preliminary Assessment of the National Environmental Policy Act of 1969*, 1973 URB. L. ANN. 209; Hill & Ortolano, *NEPA's Effect on the Consideration of Alternatives: A Critical Test*, 18 NAT. RESOURCES J. 285 (1978).

150. Cortner, *supra* note 135, at 337.

151. See authorities cited note 146 *supra*. Professor Sax, after listing "five basic rules of the game," concludes: "These rules tell us that it is nearly certain that airport authorities will continue recommending and building new runways . . . whether or not there is a NEPA and whether or not courts require them to file elaborate, multi-volume impact statements. If we want them to change their behavior, we must give them signals that will register Until we are ready to face these hard realities, we can expect laws like NEPA to produce little except fodder for law review writers and contracts for that newest of growth industries, environmental consulting." Sax, *supra* note 146, at 248.

tional commands has been the experience in connection with attempts to require the preparation of programmatic EIS's—i.e., EIS's relating to broad agency programs rather than specific component projects. The earlier that planning occurs in the development of any program, and the more comprehensive its scope, the more useful it is.¹⁵² Clearly, planning which is both early in time and comprehensive in scope is essentially and unavoidably aspirational. Thus, the sort of planning which would most effectively accomplish NEPA's substantive policy objectives—broad, programmatic planning undertaken well in advance of commitments to specific projects—is precisely the sort of planning which cannot effectively be compelled by law.¹⁵³ As a practical matter, judicial recognition of programmatic EIS responsibilities under NEPA might even discourage agencies from engaging in such long range planning. Under such a regime, as long as an agency did not voluntarily engage in programmatic planning, it would be relatively difficult for plaintiffs to prove or for courts to determine the appropriateness of an EIS prior to the agency's making a concrete proposal for action.¹⁵⁴ On the other hand, if an agency engaged in long range planning on its own initiative, the evidentiary basis of requiring the early preparation of a programmatic EIS, with its associated expense and delay, might thereby be established.¹⁵⁵ Thus, the agencies that would be penalized most frequently by being forced to

152. "If NEPA is to accomplish [the end of forcing federal agencies to consider environmental factors equally with economic and technical factors] it is necessary that environmental considerations be integrated into planning starting at the earliest possible point in the process." Hill & Ortolano, *supra* note 149, at 309. See also Andrews, *A Philosophy of Environmental Impact Assessment*, 28 J. SOIL & WATER CONSERV. 205 (1973); Comment, *The National Environmental Policy Act Applied to Policy-Level Decisionmaking*, 3 ECOLOGY L.Q. 799 (1973).

153. In a decision generally favorable toward imposing programmatic planning duties upon federal agencies under NEPA, the court in *Scientists' Inst. for Public Information, Inc. v. AEC*, 481 F.2d 1079 (D.C. Cir. 1973) explained:

In the early stages of research, when little is known about the technology and when future application of the technology is both doubtful and remote, it may well be impossible to draft a meaningful impact statement . . . NEPA requires predictions, but not prophecy, and impact statements ought not to be modeled upon the works of Jules Verne or H. G. Wells.

Id. at 1093.

154. In the *Scientists' Institute* case, the court established a four-part test with which to determine the appropriateness of an EIS:

Determining when to draft an impact statement for a technology development program obviously requires a reconciliation of . . . competing concerns. Some balance must be struck, and several factors should be weighed in the balance. How likely is the technology to prove commercially feasible, and how soon will that occur? To what extent is meaningful information presently available on the effects of application of the technology and of alternatives and their effects? To what extent are irretrievable commitments being made and options precluded as the development program progresses? How severe will be the environmental effects if the technology does prove commercially feasible?

Id. at 1094. Although the court makes the traditional deferral to agency expertise, clearly it anticipates active judicial review of agency decisions in this respect. We submit that such review will be difficult without help from the agency in the form of voluntary planning efforts, and that the problems presented to the courts would clearly exceed the limits of adjudication. See note 119 *supra*.

155. Thus, the agency involved in the *Scientists' Institute* case had actually undertaken such planning on its own initiative, and even admitted in argument that a programmatic EIS would eventually be required. 481 F.2d at 1086. The court's decision to require an EIS appears to have been influenced by these factors. *Id.* at 1096-97.

prepare sweeping programmatic EIS's would be those agencies that volunteered to engage in creative, long range planning on their own initiatives. On the other hand, the agencies that would benefit competitively under such a system would be those which most steadfastly resisted going along with NEPA's substantive mandates.

In an opinion strongly supportive of the present analysis, the Supreme Court in *Kleppe v. Sierra Club*¹⁵⁶ recently interpreted the "proposals for . . . federal action" language in section 102 to require the preparation of EIS's only in connection with, and limited by the factual predicates of, specific agency proposals and actions.¹⁵⁷ After *Kleppe*, agencies are still encouraged to take environmental factors into account during the evolution of a proposal,¹⁵⁸ but courts will not step in to compel the preparation of an EIS until the agency formally advances, or acts upon, a specific proposal.¹⁵⁹ The implications of this decision present the important question of whether NEPA's accomplishments have been worthwhile. Some critics have questioned whether the benefits of NEPA, when implemented in an essentially mechanical, nonaspirational manner, justify the costs.¹⁶⁰ Indeed, some have even insisted that NEPA's effects have been counterproductive in some areas of environmental concern.¹⁶¹ The judicial emphasis, epitomized by the *Kleppe* decision, has been upon reviewing agency procedures in connection with individual projects on an ad hoc, case-by-case basis.¹⁶²

The EIS requirement under section 102 has had some advantageous effects. Some agency actions harmful to the environment have been delayed or abandoned.¹⁶³ To some extent NEPA may also function as a disclosure law facilitating public reaction in opposition to environmentally harmful agency actions.¹⁶⁴ But without achievement of its substantive objective of compelling serious consideration of environmental concern in agency decision-making, it remains doubtful whether NEPA's accomplishments have been worth its substantial costs.¹⁶⁵

156. 427 U.S. 390 (1976).

157. Although this case is distinguishable on its facts from the *Scientists' Institute* case—e.g., the agency in *Kleppe* was not engaged in technology development, nor did the commitments being made to the component projects tend so forcefully to moot the broader question of whether to continue the overall program—the Court expressly rejected the appropriateness of the four-part test approach in favor of an approach which substantially defers to the agency's discretion. See *id.* at 405-06.

158. "[T]he [Act] contemplates a consideration of environmental factors by agencies during the evolution of a report or recommendation on a proposal." *Id.* at 406 n.15.

159. *Id.*

160. See, e.g., Hagman, *NEPA's Progeny Inhabit the States—Were the Genes Defective?*, 7 URB. L. ANN. 3 (1974); Sax, *supra* note 146.

161. E.g., Hagman, *supra* note 160, at 47 ("The NEPA . . . theory and approach to land-use control is the antithesis of comprehensive land-use control.").

162. See cases cited in notes 144-45 *supra*.

163. For a recent survey of the effects of NEPA in causing agency projects to be delayed and even abandoned, see SIX YEARS' EXPERIENCE, *supra* note 148, app. D.

164. See Tuoni, *NEPA and the Freedom of Information Act: A Prospect for Disclosure*, 4 ENV'TL AFF. 179 (1975).

165. For a recent summary of NEPA-related cost, see SIX YEARS' EXPERIENCE, *supra* note 148, at 43-48.

From the perspective of the present analysis, the failure of NEPA's substantive objective may be viewed as essentially inevitable. From the outset, the Act presented something of a dilemma. With respect to those of its provisions which would have been of greatest benefit if successful—those attempting to compel the aspiration of federal agencies—the present analysis would have predicted failure. Correspondingly, those NEPA provisions which might have been expected to succeed—the procedural provisions requiring agencies to explain specific proposals for action—are of dubious utility. In this respect, of course, NEPA is not unlike the auto emission reduction requirements of the Clean Air Act discussed earlier. Both statutory schemes have attempted to compel institutional addressees to aspire to achieve objectives toward which they would not have inclined otherwise, and both appear to have effectuated, at substantial cost, superficial changes in addressee behavior which may prove in the long run to be counterproductive.

D. The Enforcement Responsibilities of the States Under the 1970 and 1977 Amendments to Title I of the Clean Air Act

Beginning with the first major federal legislation designed to control air pollution in 1955,¹⁶⁶ Congress recognized that the states would have to play an essential part in implementing federal environmental policies. Openly aspirational, the 1955 Act sought, through grants-in-aid and technical assistance, to encourage the states to develop and enforce environmental regulations. The pressures of competition between the states have tended to preclude them from looking beyond their individual short run economic interests, however.¹⁶⁷ Thus, states hesitated to impose significant environmental clean-up costs on their own industry and commerce out of a fear that other states would thereby gain a competitive edge.¹⁶⁸ Furthermore, since air pollution cannot be contained by state boundaries, the presence of "spillover" effects provides additional inducements to the states to refrain from taking individual initiatives.¹⁶⁹ These spillovers may be substantial enough so that some states cannot solve their pollution problems by themselves. Conversely, other states may find that a substantial portion of the benefits from their expensive pollution control programs inure to neighboring states without cost to them. Thus, the states have had substantial reasons for not accepting the congressional offers to work voluntarily to provide solutions to environmental problems.

In an attempt to avoid reliance upon the voluntary cooperation of the states, the Clean Air Amendments of 1970¹⁷⁰ enlarged the role of the

166. The Air Pollution Control Act, Pub. L. No. 159, 69 Stat. 322 (1955).

167. The phenomenon that prevents individual states from sacrificing short run economic benefits for the greater good of the country as a whole is the "tragedy of the commons," discussed in notes 56-57 and accompanying text *supra*.

168. See note 58 and accompanying text *supra*.

169. See generally Stewart, *supra* note 58, at 1215-16.

170. Pub. L. No. 91-604, 84 Stat. 1676 (1970) (current version codified at 42 U.S.C.A. §§ 7401-7642 (West 1977)).

federal government and gave greater definition to the responsibilities of the states. Under the 1970 amendments, the EPA Administrator was required to establish national ambient air quality standards.¹⁷¹ The states were directed to prepare and submit to the Administrator state implementation plans (SIPs) for attainment of these standards, which were to include provisions for enforcement of emission limitations against violators.¹⁷² If a state failed to submit an adequate plan, the Administrator was required to prepare one for that state.¹⁷³ The Administrator also was given authority to initiate enforcement proceedings against sources of pollution in the event of default by the state.¹⁷⁴ Thus, the 1970 amendments provided a framework within which the states might be pressured to adopt and enforce environmental controls, but which dispensed with the need to rely exclusively upon the states to do so.

In practice, the 1970 amendments have not functioned in the manner just described. No SIP had been completely approved by the statutory deadline of December 31, 1972.¹⁷⁵ One source of difficulty has been the need to achieve significant reductions in motor vehicle emissions.¹⁷⁶ In addition to the emissions limitations on new vehicles discussed earlier,¹⁷⁷ substantial reductions in emissions from vehicles in use had to be achieved. Rather than call for extreme sacrifices in this regard, some states refused to submit plans containing transportation controls which would accomplish the needed reductions.¹⁷⁸ In such instances, the Administrator prepared outlines of transportation control plans (TCPs) for the states, and directed the states to promulgate regulations to fill in the details of the plans and then to enforce the completed plans.¹⁷⁹

Several states challenged the authority of the Administrator to require them, under threat of sanction, to exercise their lawmaking and their law enforcement functions. Five federal courts of appeals have rendered decisions on the issues thus raised.¹⁸⁰ Three have held, and the Administrator now

171. 42 U.S.C. § 1857c-4 (1976) (current version at 42 U.S.C.A. § 7409 (West 1977)).

172. *Id.* § 1857c-5 (1976) (current version at 42 U.S.C.A. § 7410 (West 1977)).

173. *Id.* § 1857c-5(c)(1) (1976) (current version at 42 U.S.C.A. § 7410(c)(1) (West 1977)).

174. *Id.* § 1857c-8 (West Supp. 1977) (current version at 42 U.S.C.A. § 7413 (West 1977)).

175. See Jorling, *The Federal Law of Air Pollution Control*, in *FEDERAL ENVIRONMENTAL LAW* 1059 (E. Dolgin & T. Guilbert eds. 1974).

176. The recognition of this by the Administrator of the EPA is contained in his general rule relating to transportation controls. See 38 Fed. Reg. 30,625, 30,627 (1973).

177. See text accompanying notes 64-68 *supra*.

178. See Stewart, *supra* note 58, at 1203-04. The magnitude of the sacrifice required for the attainment of the air quality standards in California's South Coast Air Basin is described in Chernow, *Implementing the Clean Air Act in Los Angeles: The Duty to Achieve the Impossible*, 4 *ECOLOGY L.Q.* 537 (1975). The attainment of the standards would have required an 80% reduction in motor vehicle miles travelled. *Id.* at 550.

179. The Administrator's general rule relating to TCPs, which furnished the basis for transportation control measures in SIPs, is contained in 38 Fed. Reg. 30,626 (1977). The argument that he has authority under the amendments to compel the states to promulgate and enforce transportation control measures is set out at 30,632-33.

180. Second Circuit: *Friends of the Earth v. Carey*, 552 F.2d 25 (2d Cir. 1977), *application for stay denied sub nom.* *Beame v. Friends of the Earth*, 434 U.S. 1310 (1977);

concedes, that the 1970 amendments did not confer authority upon him to order states to prepare and to enact into law regulations relating to transportation controls.¹⁸¹ The Administrator, however, has continued to insist upon his authority to compel the states to enforce the TCPs, and has emphasized the practical necessity of relying upon state enforcement procedures.¹⁸²

It is clear that any attempt to compel the states to enforce federal environmental regulations would require reliance upon aspirational mandates. Certainly, when viewed at the policy level, law enforcement is an aspirational activity.¹⁸³ By ordering the states to enforce the TCPs the Administrator did not intend that the states abandon all other law enforcement activities. Thus, while the Administrator would expect the states to make good faith decisions regarding the allocation of scarce law enforcement resources to enforcing the TCPs, the states would inevitably rely upon their own values in exercising the discretion inherent in the law enforcement planning process. For this reason, an attempt to compel the states to enforce the TCPs in ways reflective of national environmental interests, rather than their own individual interests, might have been expected to encounter many of the difficulties already considered in other contexts.

The experience has been consistent with what might have been expected. In proceedings for judicial review of the TCPs, three federal

Third Circuit: *Pennsylvania v. EPA*, 500 F.2d 246 (3d Cir. 1974); Fourth Circuit: *Maryland v. EPA*, 530 F.2d 215 (4th Cir. 1975), *vacated and remanded sub nom. EPA v. Brown*, 431 U.S. 99 (1977); Ninth Circuit: *Arizona v. EPA*, 521 F.2d 825 (9th Cir. 1975), *vacated and remanded sub nom. EPA v. Brown*, 431 U.S. 99 (1977); *Brown v. EPA*, 521 F.2d 827 (9th Cir. 1975), *vacated and remanded*, 431 U.S. 99 (1977); *Alaska v. EPA*, 521 F.2d 842 (9th Cir. 1975); D.C. Circuit: *District of Columbia v. Train*, 521 F.2d 971 (D.C. Cir. 1975), *vacated and remanded sub nom. EPA v. Brown*, 431 U.S. 99 (1977).

181. The Fourth, Ninth, and D.C. Circuits have upheld challenges to the Administrator's authority. See cases cited in note 180 *supra*. The authority of the Administrator to order states to prepare and adopt regulations was not at issue in *Friends of the Earth v. Carey*. The case involved enforcement of a plan that had been adopted by state and municipal authorities. In the process of seeking Supreme Court review of the adverse decisions, the Administrator conceded his lack of authority to compel states to enact laws or regulations. See Brief for the Federal Parties at 20 n.14, *EPA v. Brown*, 431 U.S. 99 (1977). In *Brown* the Supreme Court refused to review the orders before it, since it perceived that they would need substantial modification in light of the Administrator's concession. The judgments of the courts below were vacated and the cases remanded.

182. Direct Federal enforcement and massive, duplicative Federal programs aimed at vehicles on an individual basis were not the means contemplated by the Act to solve these problems. It is clearly necessary that implementation of transportation control plans be carried out at the State and local level. The Chairman of the House Committee that reported out the amendments to the Act described their purpose as follows:

If we left it all to the Federal Government, we would have about everybody on the payroll of the United States. We know this is not practical. Therefore, the Federal Government sets the standards, we tell the States what they must do and what standards they must meet. These standards must be put into effect by the communities and the States, and we expect them to have the means (sic) to do the actual enforcing.

38 Fed. Reg. 30,626, 30,633 (1973) (quoting 116 Cong. Rec. 19,204 (1970) (statement of Rep. Staggers)).

183. Law enforcement involves exceedingly complex decisions relating to planning and the allocation of resources among various enforcement programs. Prohibition furnishes one of the classic examples of the inability of the federal government to compel the states to enforce federal law. See note 10 *supra*.

courts of appeals have ruled that the Administrator lacks the power to compel state cooperation.¹⁸⁴ Although based on constitutional grounds, these decisions are remarkably consistent with the foregoing analysis of the inherent limits upon the effectiveness of aspirational commands. A good example is *District of Columbia v. Train*.¹⁸⁵ The National Capital Interstate Air Quality Region, consisting of the District of Columbia and parts of Maryland and Virginia, submitted a SIP to the Administrator, who disapproved some portions and promulgated a plan containing several transportation control measures. The plan called upon the state and local governments comprising the region to adopt and enforce motor vehicle inspection, maintenance and retrofit programs; to purchase additional buses and establish exclusive bus lanes; and to refuse to register any motor vehicle which failed to comply with applicable emission standards. The court of appeals sustained the plan in some respects and rejected it in others, along lines which support this analysis of the limits of aspirational commands.

With respect to the requirement that the states enforce the inspection, maintenance, and retrofit programs, the court rejected the Administrator's position and ruled that the order was unconstitutional:

In essence, the Administrator is here attempting to commandeer the regulatory powers of the states, along with their personnel and resources, for use in administering and enforcing a federal regulatory program against the owners of motor vehicles.

... Under the regulations here, the states are to function merely as departments of the EPA, following EPA guidelines and subject to federal penalties if they refuse to comply or if their regulations of vehicles is ineffective. We are aware of no decisions of the Supreme Court which hold that the federal government may validly exercise its commerce power by directing unconsenting states to regulate activities affecting interstate commerce, and we doubt that any exist.¹⁸⁶

In reaching this conclusion, the court relied upon principles of federalism which often operate to prevent attempts by the federal government to rely upon direct commands to the states to aspire in implementing federal policies.¹⁸⁷

Applying these same principles of federalism to the other portions of the TCP, the court sustained the Administrator's authority to require the states to purchase buses, to establish exclusive bus lanes, and to refuse to register motor vehicles that fail to satisfy emission standards. Although the requirements relating to the purchase of buses and the establishment of

184. See note 181 *supra*.

185. 521 F.2d 971 (D.C. Cir. 1975), *vacated and remanded sub nom.* EPA v. Brown, 431 U.S. 99 (1977).

186. *Id.* at 992.

187. See note 10 *supra*.

bus lanes called for affirmative action by the states, they specified precisely how many buses were to be purchased, and when. They even designated the streets upon which the exclusive bus lanes were to be located. And the requirement that the states refuse to register nonconforming vehicles was negative and specific. Thus, unlike the requirements struck down as unconstitutional, the requirements of the TCP upheld by the court did not involve federal reliance upon aspirational commands.¹⁸⁸

The final resolution of the Administrator's authority to compel states to enforce TCPs has been avoided, at least for the time being, by the Clean Air Act Amendments of 1977.¹⁸⁹ Under these amendments, the date for attainment of the primary air quality standards in nonattainment areas (those areas that exceed the air quality standard for any pollutant) has been postponed until 1982, and in some instances until 1987.¹⁹⁰ Although the statutory provisions under which the Administrator has asserted his authority to order the states to enforce the TCPs have not been changed, the 1977 amendments include a number of new provisions designed to indirectly pressure the states to cooperate. For example, an implementation plan for a nonattainment area must be submitted "as a precondition for the construction or modification of any major stationary source [of pollution] in any such area on or after July 1, 1979. . . ." ¹⁹¹ To qualify, plans must conform to a number of requirements, including identification of and commitment to "the financial and manpower resources necessary to carry out the plan provisions. . . ." ¹⁹² In addition, the SIPs must include "written evidence that the state [has] adopted by statute . . . or other legally enforceable document, the necessary requirements and schedules and timetables for compliance, and [is] committed to implement and enforce the appropriate elements of the plan. . . ." ¹⁹³ The 1977 amendments also provide for the withholding of federal grants otherwise authorized by the amendments, and of certain highway grants authorized by title 23 of the United States Code, for nonattainment areas that have not taken certain specified steps toward attainment.¹⁹⁴

188. This discussion should not be taken to suggest that the principles of federalism are coextensive with the limits upon the efficacy of aspirational commands. The reasons for each are different, and federal regulation of state activity by means of nonaspirational commands might well violate the principles of federalism. See *National League of Cities v. Usery*, 426 U.S. 833 (1976). Indeed, the courts in *Maryland v. EPA*, 530 F.2d 215 (4th Cir. 1975), *vacated and remanded sub nom. EPA v. Brown*, 431 U.S. 99 (1977) and *Brown v. EPA*, 521 F.2d 827 (9th Cir. 1975), *vacated and remanded*, 431 U.S. 99 (1977), took more expansive views of federalism than the court in *District of Columbia v. Train*. The *Maryland* and *Brown* courts struck down nonaspirational orders similar to those sustained in the *District of Columbia* case. In contrast, in *Pennsylvania v. EPA*, 500 F.2d 246 (3d Cir. 1974), the court rejected challenges to the authority of the administrator to order the states both to adopt regulations and enforce them.

189. Pub. L. No. 95-95, 91 Stat. 685 (1977), 42 U.S.C.A. §§ 7401-7642 (West 1977).

190. 42 U.S.C.A. § 7502(a) (West 1977).

191. *Id.* § 7502(a)(1) (West 1977).

192. *Id.* § 7502(b)(7) (West 1977).

193. *Id.* § 7502(b)(10) (West 1977).

194. *Id.* § 7506(a) (West 1977).

Looking back over the experience in recent years, it is clear that the 1970 amendments have failed to achieve their objectives.¹⁹⁵ Although the amendments appeared to set nonaspirational performance objectives for the states,¹⁹⁶ it quickly became apparent that the air quality standards could not be achieved without unacceptable levels of sacrifice. Thus, the Administrator felt compelled to seek state cooperation in achieving the best compromise between air quality and other values by ordering them to exercise their lawmaking and enforcement powers. Judicial rejections of these attempts to compel aspiration are largely based upon principles of federalism,¹⁹⁷ but quite apart from those principles, the attempts would have encountered substantial difficulties of the sort described in this article.

The Clean Air Act Amendments of 1977, in contrast to their predecessors, rely upon the withholding of benefits as well as upon the imposition of punishments to bring reluctant states into line. Whether this approach will work any better may seriously be doubted. As studies of similar attempts to control state activities in other contexts make clear,¹⁹⁸ unless a relatively high degree of specificity is achieved, the states will be unable to determine what enforcement procedures will satisfy the Administrator and the Administrator will be unable to determine when to withhold the benefits. As a practical matter, that degree of specificity is unlikely to be achieved. Moreover, the constitutionality of the cutting off of highway funds as a means of attempting to compel the states to enforce the TCPs is not clear.¹⁹⁹ But even assuming that principles of federalism do not preclude this type of congressional

195. See Downing & Brady, *Implementing the Clean Air Act: A Case Study of Oxidant Control in Los Angeles*, 18 NAT. RES. J. 237 (1978).

196. The 1970 amendments to title I contained provisions which on their face helped to convert the performance objectives into aspirational commands. Upon application of the governor at the time of filing of a SIP, the Administrator is authorized to extend the time for the attainment of air quality standards in a state for up to two years if he determines that the necessary technology will not be available to reach the standards within the statutory time period. 42 U.S.C. § 1857c-5(e) (1976) (current version at 42 U.S.C.A. § 7410(e) (West 1977)). The Administrator is also authorized to grant a postponement for up to one year of any requirement of the SIP upon the application of a governor, if he determines that good faith efforts to comply have been made and that the necessary technology is not available. 42 U.S.C. § 1851c-5(f) (1976) (current version at 42 U.S.C.A. § 7410(e) (West 1977)). Recognizing that control technology might not be available for states for which transportation control measures would be required, the Administrator granted two-year extensions for states requiring TCPs, and indicated that he would seek legislation delaying the air quality standards attainment date. 38 Fed. Reg. 30,626, 30,626-27. It was a similar pattern of extensions based upon an absence of control technology that converted the seeming specificity of title II into an aspirational mandate. See text accompanying notes 64-82 *supra*.

197. The literature involving the interpretation of title I and the related problems of federalism is extensive. See, e.g., Gordon, *When Push Comes to Infringement of State Sovereignty: Implementation of EPA's Transportation Control Plans*, 1976 WIS. L. REV. 1111; Luneburg, *Federal-State Interaction Under the Clean Air Amendments of 1970*, 14 B.C. IND. & COM. L. REV. 637 (1973); Salmon, *The Federalist Principle: The Interaction of the Commerce Clause and the Tenth Amendment in the Clean Air Act*, 2 COLUM. J. ENV'T'L L. 290 (1976); Stewart, *supra* note 58; Note, *The Clean Air Act: "Taking a Stick to the States,"* 25 CLEV. ST. L. REV. 371 (1976); Note, *The Clean Air Act Amendments of 1970: A Threat to Federalism?*, 76 COLUM. L. REV. 990 (1976); Comment, *The Clean Air Amendments of 1970: Can Congress Compel State Cooperation in Achieving National Environmental Standards?*, 11 HARV. C.R.-C.L. L. REV. 701 (1976).

198. See notes 41-45 and accompanying text *supra*.

199. See Stewart, *supra* note 58, at 1250-62.

regulation of state governments,²⁰⁰ the limited effectiveness of aspirational commands will remain as a substantial barrier to the successful use of grants-in-aid to compel states to implement federal environmental policies.²⁰¹

CONCLUSION

Traditional approaches to the allocation of environmental resources have been primarily through the marketplace, controlled to some extent by rules of law establishing priorities of their use among owners of land. It has become apparent that these approaches are inadequate to protect the larger public interests in health and welfare, and that the states cannot be expected to take initiatives in creating new environmental regulatory programs. Thus, the federal government has had to assume the dominant role in formulating and implementing environmental policies and programs. Increasingly in recent years, federal regulatory efforts have included aspirational commands directed at both governmental agencies and private firms to attempt to secure their cooperation in implementing federal policies. In spite of the fact that these commands have often been accompanied by threats of substantial sanctions, they usually have not produced the desired responses. This article attributes much of the difficulties to substantial and unavoidable limits on an addressor's ability to compel others to aspire to achieve objectives which are incompatible with the addressees' value structures. The practical considerations supporting reliance upon aspirational commands in the field of environmental protection are understandable. The business firms and governmental agencies to whom these commands are addressed possess technical and logistical capabilities markedly superior to federal lawmakers.²⁰² Furthermore, aspirational commands may serve to change attitudes toward environmental protection, and thus bring about a greater coincidence in values between the federal lawmakers and those to whom the environmental protection laws are addressed.²⁰³ But whether or not this reliance may appear to be sensible from a practical standpoint, an understanding of the limits upon the effectiveness of aspirational commands reveals it to be misplaced.

In attempting thus to explain the difficulties associated with federal environmental regulatory efforts in recent years, care must be taken to avoid claiming too much for one's thesis. Obviously, other factors have contributed to frustrating attempts to implement federal environmental policies. Federal regulatory schemes are typically addressed to very large and politically

200. See Choper, *The Scope of National Power Vis-à-Vis the States: The Dispensability of Judicial Review*, 86 YALE L.J. 1552 (1977).

201. For different reasons, Professor Stewart shares this pessimism about the use of grants-in-aid. See Stewart, *supra* note 58, at 1251. Downing and Brady also hold out little hope that the 1977 amendments will succeed. See Downing & Brady, *supra* note 195, at 282.

202. The term "federal lawmaker" includes, where appropriate, Congress, administrative agencies, and federal judges.

203. See note 2 and accompanying text *supra*.

powerful institutions, by lawmakers admittedly acting without adequate knowledge of the costs involved. Enforcement of even specific environmental regulations can be expected to be difficult in periods of economic recession, with their understandable, if not applaudable, anti-environmental swings in public opinion. Rather than attempting to explain all that has occurred by means of a single principle, this Article suggests that among the factors responsible for the frustration of attempts to implement federal environmental policies is one factor apt to be overlooked in favor of the others—inherent limitations upon the efficacy of aspirational commands.

That reliance upon aspirational commands may have been fruitful in some important areas of public concern, such as in the field of civil rights, does not detract from the foregoing analysis of federal environmental regulatory efforts. Consistent with the analysis in this Article, aspirational commands may have greater potential in situations which do not present, in so stark a fashion, the earlier described phenomenon of the tragedy of the commons.²⁰⁴ But where the phenomenon exists as it does in the field of environmental regulation—where it is clearly against the competitive interests of addressees to cooperate voluntarily in response to aspirational commands—reliance upon appeals to conscience, even when accompanied by threats of sanctions, can be expected to lead to frustration and in some instances to produce results which are contrary to those intended.

What all of this comes down to is not a doomsday appraisal of despair, but rather an obvious truth: there are no easy solutions available to federal lawmakers seeking to regulate decisions and activities significantly affecting the environment. Like the monarch who wanted to capture the skills but not the values of the poet, federal lawmakers are confronted in this context with an institutionalized, potentially threatening separation of skills and values. Business firms and state governments possess both the technical skills to develop solutions and the logistical capabilities to carry them out. Often, however, they are trapped in destructive patterns of short run competition which preclude them from giving adequate consideration to environmental values. In contrast, federal lawmakers are in a position to establish the proper values, but frequently lack the technical skills and logistical capabilities to implement them without substantial cooperation from the firms and the states. The foregoing analysis suggests that this separation may not successfully be bridged by aspirational commands aimed at commandeering the institutional addressees' skills and bending them to the federal lawmakers' values. It follows that if the harmful consequences of this separation of skills and values are to be reduced, the separation itself must somehow be reduced: either the federal lawmakers must acquire sufficient expertise to be able, either directly or indirectly, to tell the institu-

204. See notes 56-57 and accompanying text *supra*.

tional addressees more specifically what to do, or the institutional addressees must be restructured to reflect the lawmakers' values more closely.²⁰⁵

With this last observation, the present analysis comes full circle, for it will be recalled that these were the difficult-to-implement alternatives that rendered attractive the possibility of relying upon aspirational commands.²⁰⁶ But it should now be apparent that the problems associated with attempting to compel aspiration are just as formidable. Therefore, what appears to be required is a commitment of sufficient resources to render workable an appropriate combination of these alternatives. To some extent, the heavy reliance by Congress upon aspirational commands in recent years may reflect what some environmentalist writers have long and openly suspected—that in the final analysis, federal lawmakers lack the resolve to commit the resources necessary to implement their environmental policies effectively.²⁰⁷ This is not to say that these lawmakers have acted deliberately to subvert their own publicly proclaimed goals. It is more likely that given the competing demands of a wide variety of social welfare programs, they have taken a relatively high sounding, seemingly low cost road, and have hoped for the best. From this perspective, the chief utility of this analysis may be to expose the unavoidable difficulties involved in these attempts, thereby bringing nearer the day when the hard, but necessary, choices will be made.

205. See Tribe, *supra* note 1, at 52-53.

206. See notes 59-63 and accompanying text *supra*.

207. Hypocrisy on the part of government officials, including those in Congress, is not unknown, and cynicism about Congress's commitment to its stated goals is occasionally expressed. See, e.g., Sax, *supra* note 146, at 248. Notwithstanding such occasional expressions of frustration, there is too much evidence of sincere congressional concern over environmental quality to accept a cynical explanation of the failure of the federal attempts of environmental regulation analyzed in this Article. For example, the imposition of criminal penalties for manufacturers' violations of title II of the Clean Air Amendments of 1970, see 42 U.S.C.A. § 7524 (West 1977), represents a clear attempt to put teeth in the legislation, and there can be no doubt that Congress was concerned with the possibility that the suspension provisions of title II would undermine the legislation's technology-forcing potential. See note 93 and accompanying text *supra*. In connection with NEPA, the procedural requirements of § 102 were added as a means of forcing federal agencies to comply with the Act's substantive provisions. See note 142 and accompanying text *supra*. The purpose behind the provisions of the 1970 amendments to title I of the Clean Air Act requiring states to prepare and file SIPs was clearly to force the states to assume an active role in the implementation of national environmental policies. See text accompanying notes 166-74 *supra*. A fair reading of reports of recent congressional hearings supports the conclusion that congressional commitment to a better environment remains strong. See, e.g., *Implementation of the Clean Air Act: Hearings Before the Subcomm. on Environmental Pollution of the Senate Comm. on Public Works, 94th Cong., 1st Sess.* 131-39 (1975) (opening statements); *Proposed Amendments to the Clean Air Act: Hearings on S. 251, S. 252, and S. 253 Before the Subcomm. on Environmental Pollution of the Senate Comm. on Environment and Public Works, 95th Cong., 1st Sess.* 13-19 (Part 1 1977) (opening statements).

THE NATIONAL QUEST FOR CLEAN AIR 1970-1978: INTERGOVERNMENTAL PROBLEMS AND SOME PROPOSED SOLUTIONS†

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Experience under the Clean Air Act¹ since 1970 has demonstrated the difficulties inherent in designing a regulatory program which is adequate not only to control air pollution, but also to give recognition to the various interests represented in the federal system.² After almost seven years and numerous oversight hearings,

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¹ 42 U.S.C. §§ 1857-1857f (1970 & Supp. V 1975), as amended by Clean Air Amendments of 1977, Pub. L. No. 95-95, 91 Stat. 685 (providing for a general updating of the Clean Air Act) [hereinafter cited as Clean Air Amendments], as amended by Safe Drinking Water Amendments of 1977, Pub. L. No. 95-190, § 14, 91 Stat. 1393, 1399-1405 (providing for minor technical changes to the Clean Air Act) [hereinafter cited as Water Amendments]. Pursuant to the Clean Air Amendments, the Clean Air Act, as amended, will be codified at 42 U.S.C. §§ 7401-7642. Because those amendments have not been incorporated into 42 U.S.C., this article will cite the unofficial code where applicable. See 42 U.S.C.A. §§ 7401-7642 (West Supp. 1978).

² For examinations of the difficulties encountered in connection with federal programs for air pollution control in effect prior to 1970, see O'Fallon, *Deficiencies in the Air Quality Act of*

Congress in 1977 enacted changes to that statute,³ many of which were considered necessary to remedy structural and administrative intergovernmental problems which came to light during that period. However, the scheme, first established in 1970, for allocating regulatory responsibilities between the various levels of government was left basically unchanged. The federal government retains the authority to set the minimum standards for ambient air quality for certain designated pollutants.⁴ The states have the first option to design, implement, and enforce the specific emission limitations and other measures necessary to attain and maintain those standards⁵ or, if the state wishes, more stringent standards.⁶ The federal government, nevertheless, has the right and duty to formulate, implement, and enforce necessary emission reduction plans in those cases where states fail to act in accordance with the statutory requirements.⁷ If the federal government approves a state-adopted plan as consistent with the statutory criteria, the regulations contained in the plan become enforceable by the federal government⁸ as well as by private

1967, 33 LAW & CONTEMP. PROB. 275 (1968); Trumbull, *Federal Control of Stationary Source Pollution*, 2 ECOLOGY L.Q. 283 (1972); 32 OHIO ST. L.J. 58 (1971).

³ See note 1 *supra*.

⁴ These are the national primary and secondary ambient air quality standards established pursuant to 42 U.S.C.A. § 7409 (West Supp. 1978). Primary standards designate the concentrations of various ambient-air pollutants above which adverse effects on human health have been identified; secondary standards designate the concentrations of various ambient-air pollutants above which there are adverse effects on public welfare. *Id.* § 7409(b). For comprehensive definition of "effects on welfare," see *id.* § 7602(h). Secondary standards are generally more stringent than primary standards.

To date, the national ambient standards cover sulfur oxides, particulate matter, carbon monoxide, photochemical oxidants, hydrocarbons, and nitrogen dioxide. 40 C.F.R. §§ 50.1-.11 (1977). Ambient standards are established only for those pollutants having an adverse effect on public health or welfare whose presence in the air results from *numerous or diverse* mobile or stationary sources. 42 U.S.C.A. § 7408(a)(1) (West Supp. 1978). The federal government also has authority to establish emission limitations for certain categories of new and existing sources of air pollution. See note 133 *infra*.

⁵ 42 U.S.C.A. § 7410(a) (West Supp. 1978); *id.* § 7413(a)(1). As used in the discussion that follows, the terms "emission limitation(s)" and "emission controls" refer to regulations that limit the output of pollutants from sources. The aggregate of emission controls and other measures designed to attain and maintain the ambient standards in a state is known as the state's "control strategy" (40 C.F.R. § 51.1(n) (1977)), or its "implementation plan."

⁶ 42 U.S.C.A. § 7416 (West Supp. 1978).

⁷ 42 U.S.C.A. § 7410(c) (West Supp. 1978); *id.* § 7413. The statute does not explicitly foreclose federal enforcement when the state is also taking enforcement action. Abstention by the federal courts may be called for in certain instances, however. See text accompanying notes 341-44 *infra*. As used in this article, references to federal "promulgation" are to those instances where the federal government establishes the regulations applicable to a state that has failed to submit an implementation plan meeting the requirements laid down in 42 U.S.C.A. § 7410(a)(2) (West Supp. 1978).

⁸ 42 U.S.C.A. § 7413 (West Supp. 1978).

citizens.⁹

A principal factor behind the demand for some type of federally mandated air quality and emission standards has been the fear that interstate competition for industry, without the federal presence, would enervate state control programs.¹⁰ Even those recognizing the need for federal involvement have questioned whether it would not make more economic sense to permit some regional variation in the ambient standards in order to take into account the differing costs of control from area to area.¹¹ Federal promulgation of nationally uniform, minimum ambient standards has, nevertheless, been the approach adopted to date.¹² The specific emission controls designed to attain the national standards have varied from state to state, and between regions in the same state, due to differences in existing air quality levels with respect to the prescribed air quality goals.¹³ At the same time, some states have desired to attain an air quality cleaner than that mandated by the federal ambient standards. Ways have been sought to advance those interests.¹⁴

The need to strike a balance between uniformity and diversity was addressed by Congress, at least to some extent, in the recent

⁹ 42 U.S.C.A. § 7604 (West Supp. 1978). Since states are "persons" within the meaning of this provision, 42 U.S.C.A. § 7602(e) (West Supp. 1978), they may enforce implementation plans under the authority of this section, whether the plans are approved or promulgated by the EPA. See *Hancock v. Train*, 426 U.S. 167, 195-96 (1976); Luneburg, *Federal-State Interaction Under the Clean Air Amendments of 1970*, 14 B.C. INDUS. & COM. L. REV. 637, 662-64 (1973).

¹⁰ See, e.g., H.R. REP. NO. 294, 95th Cong., 1st Sess. 133-37 (1977) [hereinafter cited as 1977 HOUSE REPORT]; H.R. REP. NO. 1146, 91st Cong., 2d Sess. 3 (1970), reprinted in [1970] U.S. CODE CONG. & AD. NEWS 5356, 5358 [hereinafter cited as 1970 HOUSE REPORT]. See also Hines, *A Decade of Nondegradation Policy in Congress and the Courts: The Erratic Pursuit of Clean Air and Clean Water*, 62 IOWA L. REV. 643, 697, 700 (1977).

¹¹ Blair, Fesmire, & Kaserman, *Regional Considerations of the Clean Air Act*, 7 GROWTH & CHANGE (No. 4) 3-7 (1976); Heitner & Krier, *An Approach to Air Quality Management Standards*, 24 J. AIR POLL. CONT. A. 1039 (1974).

¹² 40 C.F.R. § 50.1-.11 (1977). There is some question whether the 1970 Amendments permitted national ambient standards to vary by region. See Currie, *Federal Air-Quality Standards and Their Implementation*, 1976 AM. B. FOUNDATION RESEARCH J. 365, 368-69; Krier, *The Irrational National Air Quality Standards: Macro- and Micro-Mistakes*, 22 U.C.L.A. L. REV. 323, 341-42 (1974). Congress did not explicitly address this issue in the recent changes in the law. However, the newly enacted provisions for prevention of significant deterioration of air quality currently better than the national standards, 42 U.S.C.A. §§ 7470-7479 (West Supp. 1978), attempt to give the states some flexibility in taking different social and economic conditions into account in classifying regions and, thereby, placing limits on construction of new sources. For further discussions of the impact of these new provisions, see text accompanying notes 127-29 and 183-92 *infra*.

¹³ See, e.g., [1977] ENVIR. REP. (BNA) (State Air Laws) 396.0111 (sulfur content in fuel regulations for Maine).

¹⁴ 1977 HOUSE REPORT, *supra* note 10, at 134-37.

changes made in the Clean Air Act. However, this was only one, though perhaps the most important, of the issues concerning development, adoption, and enforcement of air quality standards and pollution control plans under the statute.¹⁵ The following discussion will explore the myriad intergovernmental problems which arose in connection with the administration of the Act since 1970. In addition, congressional solutions to those problems and innovations introduced by the 1977 Clean Air Act Amendments will be examined in detail.

ESTABLISHMENT AND IMPLEMENTATION OF STANDARDS AND PLANS

Delay in Establishment of Implementation Plans

In view of Congress's heightened perception of the health hazards posed by air pollution,¹⁶ together with the failure of the states to respond quickly enough to the 1967 Air Quality Act¹⁷ requirements for establishing a regulatory framework to deal with the threat,¹⁸ Congress in 1970 placed both the federal government and the states on an expedited schedule. Under the Clean Air Act Amendments of 1970,¹⁹ both national primary ambient air quality standards and the necessary emission controls (implementation plans) to achieve those standards before 1976—or, if technology

¹⁵ More general and theoretical discussion of the proper allocation of governmental responsibility for pollution control are contained in C. JONES, *CLEAN AIR: THE POLICIES AND POLITICS OF POLLUTION CONTROL* (1975); Hassett, *Enforcement Problems in the Air Quality Field: Some Intergovernmental Structural Aspects (Part I), State and Local Problems*, 19 WAYNE L. REV. 1079 (1973); Hassett, *Enforcement Problems in the Air Quality Field: Some Intergovernmental Structural Aspects (Part II), Problems of Interstate Cooperation*, 4 ECOLOGY L.Q. 63 (1974); Zerbe, *Optimal Environmental Jurisdictions*, 4 ECOLOGY L.Q. 193 (1974). These commentators favor vesting more responsibility in state and local governments in the area of air pollution control. Increased federal involvement is favored by other commentators. See, e.g., Currie, *supra* note 12, at 408-09. For the view that no internally consistent theory can be used to guide the allocation of governmental authority in a particular field, see Campell, *Functions in Flux*, in *AMERICAN FEDERALISM: TOWARD A MORE EFFECTIVE PARTNERSHIP: A REPORT OF AND PAPERS FROM THE NATIONAL CONFERENCE OF AMERICAN FEDERALISM IN ACTION* (1975).

For an excellent analysis which indicates that many of the same problems discussed below have been encountered in the area of water pollution control since 1972, see H. LIEBER, *FEDERALISM AND CLEAN WATERS: 1972 WATER POLLUTION CONTROL ACT* (1975).

¹⁶ S. REP. NO. 1196, 91st Cong., 2d Sess. 1-4 (1970) (statement of Sen. Byrd).

¹⁷ 81 Stat. 485 (1967).

¹⁸ 1970 HOUSE REPORT, *supra* note 10, at 5.

¹⁹ Pub. L. No. 91-604, 84 Stat. 1676 (1970), *amending* 42 U.S.C. §§ 1857-1857/ [hereinafter cited as 1970 Amendments].

was not available, before 1978—were to be in effect by mid-1972.²⁰ As a matter of fact, the major part of the regulatory network which the United States Environmental Protection Agency²¹ (EPA) originally believed to be necessary was established within or nearly within the mandated time frame.²²

In several important instances, however, the 1970 Amendments showed the same proclivity to delay in the establishment of implementation plans that had plagued its predecessor. For example, several electric utilities challenged EPA's original approval of the Ohio implementation plan. The United States Court of Appeals for the Sixth Circuit remanded the plan to the EPA²³ for compliance with the rulemaking provisions of the Administrative Procedure Act.²⁴ Soon thereafter the state of Ohio withdrew the sulfur dioxide portion of its control strategy in order to embark on what turned out to be an extensive and unsuccessful attempt to arrive at less stringent, though still federally approvable, regulations.²⁵ For several years the EPA waited for the state to present its own plan. Finally, threatened by a citizen's suit to compel action, it promulgated a sulfur dioxide strategy for Ohio in late 1976.²⁶ Another appeal to the United States

²⁰ 42 U.S.C. § 1857c-4(a), -5(a)(1), -5(a)(2), -5(c) (1970) (current version at 42 U.S.C.A. §§ 7409(a), 7410(a)(1), 7410(a)(2), 7410(e) (West Supp. 1978)). Secondary standards were to be achieved in a "reasonable time." 42 U.S.C. § 1857c-5(a)(2)(A)(ii)(1970) (current version at 42 U.S.C.A. § 7410(a)(2)(A)(ii) (West Supp. 1978)). Plans for their attainment could be submitted up to 18 months after the date required for submission of plans to attain the primary standards. 42 U.S.C. § 1857c-5(b)(1970) (current version at 42 U.S.C.A. § 7410(b) (West Supp. 1978)). The 1977 Amendments have allowed delays for achievement of the primary ambient standards at least up to December 31, 1982, except in the case of automobile-related pollutants where the standards can be attained as late as December 31, 1987. Clean Air Amendments, § 129(b), 91 Stat. 745, *as amended by* Water Amendments, § 14(a)(55), (56), 91 Stat. 1402 (codified at 42 U.S.C.A. § 7502 (West Supp. 1978)).

²¹ The EPA was established by Reorg. Plan No. 3 of 1970, 3 C.F.R. 1072 (1966-1970 Compilation), *reprinted in* 5 U.S.C. app., at 609-13 (1970), *also reprinted in* 84 Stat. 2086-89 (1970) (current version at 40 C.F.R. pt. 1 (1977)).

²² Where a state implementation plan has been approved by the federal government, its provisions are incorporated by reference in 40 C.F.R. pt. 52 (1977). Any regulations promulgated by the federal government and applicable to a state appear verbatim in part 52, arranged alphabetically by state.

²³ *Buckeye Power, Inc. v. EPA*, 481 F.2d 162 (6th Cir. 1973). EPA approval or promulgation of an implementation plan for a state can be reviewed in the United States court of appeals for the circuit encompassing the state to which the regulations apply. 42 U.S.C.A. § 7607(b)(1) (West Supp. 1978). *Buckeye* disposed of one such appeal.

²⁴ 5 U.S.C. §§ 551-559 (1976). In *Buckeye*, the EPA was ordered to comply with the requirements of § 553 and, thus, allow interested parties to comment on the proposed approval of the Ohio and Kentucky plans.

²⁵ As of the end of 1977, Ohio was still in the process of trying to develop such a plan. See [1977] 8 ENVIR. REP. (BNA) (Current Developments) 866.

²⁶ This scenario is described and the federally promulgated regulations are contained at 41

Court of Appeals for the Sixth Circuit promptly followed.²⁷ Four years after the date originally scheduled by Congress for the start of the abatement of sulfur dioxide pollution in Ohio, the regulatory process remained, to a large degree, on dead center. It was not until 1976 that the federal government was able to commence enforcement actions against some of the sources subject to the federally promulgated plan.²⁸

Delay was not confined to Ohio. While federal approval of the Indiana and Illinois implementation plans survived lengthy challenges in the United States Court of Appeals for the Seventh Circuit,²⁹ the sulfur dioxide regulations applicable to fuel combustion sources were overturned by the state courts. In Illinois this occurred in 1974, with an affirmance by the state supreme court of a lower court decision in 1976. In Indiana the state court decision was handed down in 1975.³⁰ The EPA had suggested to the court of appeals that such state court action necessitated its promulgation of a

Fed. Reg. 36,324-40 (1976) (codified at 40 C.F.R. §§ 52.1875, .1881) (1977). See also Note, *The Environmental Protection Agency's Hearing Examiners' Report and Recommendations*, 4 CAP. U.L. REV. 325 (1975); Note, *The Clean Air Act: "Taking a Stick to the States,"* 25 CLEV. ST. L. REV. 371 (1976) [hereinafter cited as CLEVELAND NOTE].

²⁷ Cleveland Elec. Illuminating Co. v. EPA, No. 76-2090 (6th Cir. 1976). The federal regulations were later amended for some sources as a result of this appeal. See 42 Fed. Reg. 27,588 (1977). The promulgation of this revised set of regulations was also appealed. Cincinnati Gas & Elec. Co. v. EPA, No. 77-1367 (6th Cir. 1977). Finally, in February, 1978, the Sixth Circuit upheld EPA promulgation of a sulfur dioxide strategy as applied to certain designated facilities in Ohio. Cleveland Elec. Illuminating Co. v. EPA, 572 F.2d 1150 (6th Cir. 1978). The remainder of the plants in the state covered by the EPA regulations are to be dealt with in opinions issued later.

²⁸ Telephone interview with David Kee (U.S. Environmental Protection Agency, Region V) (Jan. 16, 1978). Federal enforcement against the sources which had appealed the EPA plan to the Sixth Circuit was stayed pending disposition of those appeals. See 572 F.2d at 1155-56.

²⁹ Indiana & Mich. Elec. Co. v. EPA, 509 F.2d 839 (7th Cir. 1975).

³⁰ In Illinois the sulfur dioxide and particulate regulations for fuel combustion sources were held to be arbitrary and unreasonable because of the Pollution Control Board's (PCB) alleged failure to adequately consider their technological feasibility or economic reasonableness. Commonwealth Edison Co. v. Pollution Control Bd., 25 Ill. App. 3d 271, 323 N.E.2d 84 (1974), *aff'd on other grounds*, 62 Ill. 2d 494, 343 N.E.2d 459 (1976). In view of the fact that the PCB had directed new hearings on the precise issues the Illinois Supreme Court was asked to consider in the appeal, and, since new information and recent legislation could affect the application or modification of the regulations, the court held that it was appropriate to affirm the appellate court reversal of the adoption of the rules and remand them to the PCB.

In Indiana-Kentucky Elec. Corp. v. Indiana Envir. Mgmt. Bd., No. C73-675 (Ind., Marion Cir. Ct., Nov. 10, 1975), *appeal docketed*, No. 2-576A-180 (Ind. Ct. App., May 10, 1976), the adoption of the state's sulfur dioxide regulations was held to be invalid for failure to comply with certain procedural requirements of state law. The lower court, however, stayed execution of the requested injunction against the state agency pending appeal. Enforcement by the state against sources subject to the plan did not follow, however. Telephone interview with Edgar Stresino, Chief, Enforcement Branch, Indiana Air Pollution Control Board (June 13, 1978).

substitute plan for the affected state in the absence of state submission of a revised, legally adopted plan.³¹ EPA action was apparently avoided in Illinois by the Pollution Control Board's reinstatement of the sulfur dioxide regulations in 1977,³² though the reinstatement was the subject of challenges filed in the state courts.³³ In Indiana, the EPA delayed promulgation and enforcement pending a ruling by the state appellate court on the state law issues presented by the adoption of the regulations. During the course of these state proceedings a considerable number of large, as well as small, sources escaped control.³⁴

These three cases are merely illustrative of the opportunities for delay intrinsic to a system where authority for formulating abatement plans is lodged simultaneously in two levels of government.³⁵ The likelihood of such a pattern repeating itself in the future is substantial in view of the number of revised plans that must be devised over the next several years in response to recent EPA³⁶ and congressional³⁷ action.

³¹ See *Indiana & Mich. Elec. Co. v. EPA*, 509 F.2d 839, 847 (7th Cir. 1975).

³² *In re* Emission Standards, No. R71-23 (Illinois PCB July 7, 1977).

³³ See, e.g., *Illinois State Chamber of Commerce v. Pollution Control Bd.*, No. 77-1176 (Ill. App. Ct. Aug. 15, 1977) and No. 77-1385 (Ill. App. Ct. Sept. 23, 1977).

³⁴ Telephone interview with David Kee (U.S. Environmental Protection Agency, Region V) (June 8, 1978). As of December, 1975, Ohio, Indiana, and Illinois combined had 102 of the 394 coal-fired power plants in the country. U.S. ENVIRONMENTAL PROTECTION AGENCY, EPA ENFORCEMENT: A PROGRESS REPORT, AIR, NOISE, PESTICIDES, WATER—DECEMBER 1974 TO DECEMBER 1975, at 11-12 (1976) [hereinafter cited as EPA ENFORCEMENT]. As a class, coal-fired steam electric plants emit about 60% of the total sulfur oxide produced by all sources.

Id.

³⁵ Delay in establishing implementation plans was not confined to those instances where state courts or state administrative agencies overturned regulations. For example, in 1976, the EPA reaffirmed its approval of the West Virginia regulations relating to sulfur oxide and particulate control, which had been previously remanded for additional opportunity for comment by interested parties in *Appalachian Power Co. v. EPA*, 477 F.2d 495 (4th Cir. 1973). See 40 C.F.R. § 52.2520 (1977). See also *id.* §§ 52.670, .676, .680 (1977) (approval and promulgation of certain portions of a sulfur oxide strategy for Idaho).

³⁶ In 1976 the EPA issued 246 calls for implementation plan revisions relating to attainment and maintenance of the ambient standards because the plans as then existing were considered substantially inadequate to attain and maintain the standards. There were 25 calls for revision for maintenance only. U.S. ENVIRONMENTAL PROTECTION AGENCY, STATE AIR POLLUTION IMPLEMENTATION PLAN PROGRESS REPORT, JANUARY 1 TO JUNE 30, 1976, at 1 (1976) [hereinafter cited as 1976 EPA PROGRESS REPORT]. These revisions affected 45 states and related to all pollutants covered by the national ambient standards. See [1976] 7 ENVIR. REP. (BNA) (Current Developments) 435.

³⁷ These include plans for the prevention of significant deterioration of currently clean air, 42 U.S.C.A. §§ 7470-7479 (West Supp. 1978), and areas where air quality is currently exceeding the national ambient standards, 42 U.S.C.A. §§ 7501-7508 (West Supp. 1978).

While such delays and inefficiencies are regrettable, an approach to formulation of control strategies which would prove to be superior to the dualistic scheme is not clearly available at the present time. Neither level of government, working alone, appears capable of effective and efficient regulation. Vesting exclusive jurisdiction in the EPA to design necessary controls would confine the potential for administratively or judicially created delay to one governmental level in the plan formulation stage. On the other hand, it would be unlikely that one federal agency could easily design plans individually suited to the needs and conditions of the different areas of the nation, thereby avoiding the problems of overly stringent control of some emission sources and other types of economic waste.³⁸ Nor should the probable local resistance to federally designed measures be underestimated, at least where the controls directly affect people's lifestyles. The history of the ill-fated transportation control plans promulgated by the EPA to reduce automobile pollution confirms the likelihood of encountering substantial difficulties of that nature.³⁹ Additional manpower and funding for the EPA, when cou-

³⁸ It has been argued that the degree of uniformity of an agency's regulations increases with the size of the agency's territorial jurisdiction, and with increasing uniformity comes increasing economic inefficiency. The causes for this phenomenon allegedly include the administrative desire for "ease, power, and security." Uniformity simplifies decisionmaking, reduces administrative cost, and eliminates charges of inequity. Zerbe, *supra* note 15, at 209-22.

The objection to federal preemption posed in the text is not, moreover, obviated, at least at the present time, by dispersion models which purportedly show the relative contributions of particular plants to maximum points of air pollutant concentration and, thereby, eliminate overkill in control strategy design. For a discussion of such a model (RAM), see *Cleveland Elec. Illuminating Co. v. EPA*, 572 F.2d 1150, 1160-64 (6th Cir. 1978), where the court upheld use of the model at issue in the EPA's design of the sulfur dioxide strategy for Ohio. As that case shows, the accuracy of such models is not unchallenged. Moreover, to utilize those analytical techniques, detailed knowledge of, *inter alia*, local topography, weather conditions, and design and operation of existing pollution-creating facilities is essential, some of which information is clearly more easily accessible to, and therefore more likely to be considered by, state and local, rather than federal, control officials. While an accurate model might be available, this does not necessarily mean that it would be used if the EPA had to design plans for the entire country. Professor Zerbe's observations give some credence to doubts on this point. Finally, while a diffusion model may establish that one source contributes a certain percentage of the pollution at a particular location, pollution reduction by that facility determined solely by its percentage contribution may not necessarily be the most economically sound approach. It might, for example, be cheaper for a smaller contributor to the air quality problem to reduce its emissions than to require stringent control by a larger source. State and local officials are arguably as well, if not better, suited than the EPA to assess such a situation and decide on an appropriate control strategy.

³⁹ Given the high levels of automobile-related pollutants (carbon monoxide and photochemical oxidants) in the ambient air of many urban areas and the failure of most states to submit approvable implementation plans to deal with the problem, the EPA was forced in 1973 to promulgate extremely severe restrictions on parking and highway and street use,

pled with the regional structure of the Agency which enables it to develop some sensitivity to local conditions,⁴⁰ might mitigate such problems but could not eliminate substantial diseconomies and popular discontent.⁴¹

State participation may not guarantee consideration of local conditions. The original implementation plans prepared during 1971 and 1972 indicated that some states were capable of ignoring local and regional diversity in designing controls.⁴² To some extent that uniformity can be attributed to the short time allowed for formulating the plans. At the same time, imperfections in a state's po-

among other things, in order to achieve the reduction in pollution levels required by the statute. See, e.g., 40 C.F.R. §§ 52.1134 - .1154 (1977) (transportation control plan for Boston and Springfield, Massachusetts). The impact of the plans on personal lifestyles was so significant that the public outcry was deafening. See, e.g., *Implementation of Transportation Controls (Part III), Hearings Before the Subcomm. on Environmental Pollution of the Senate Comm. on Public Works*, 93d Cong., 2d Sess. 745, 747 (1974) [hereinafter cited as *Controls Hearings (III)*] (study by J. Fensterstock & D. Speaker); [1975] 5 ENVIR. REP. (BNA) (Current Developments) 1682 (EPA dropped Boston parking space reduction plan because public and employer opposition made it unenforceable).

The transportation plans, including their history and the details of the strategies, are described in J. HOROWITZ & S. KUHZTZ, *TRANSPORTATION CONTROLS TO REDUCE AUTOMOBILE USE AND IMPROVE AIR QUALITY IN CITIES* (1974). Progress in carrying out the plans was spotty at best. See, e.g., [1977] 7 ENVIR. REP. (BNA) (Current Developments) 1304. A particularly telling criticism of the EPA transportation plan formulation process is found in R. SANSOM, *THE NEW AMERICAN DREAM MACHINE, TOWARD A SIMPLER LIFESTYLE IN AN ENVIRONMENTAL AGE* 161-73 (1976). Also important is J. QUARLES, *CLEANING UP AMERICA: AN INSIDER'S VIEW OF THE ENVIRONMENTAL PROTECTION AGENCY* 196 (1976). Mr. Quarles was the EPA's Assistant Administrator during this period and in part attributes the erosion in public support for environmental improvement which started to surface in 1973 to the transportation control plans. A further critique is found in Chernow, *Implementing the Clean Air Act in Los Angeles: The Duty to Achieve the Impossible*, 4 *ECOLOGY L.Q.* 537 (1975).

⁴⁰ Unlike the case of many federal agencies, the ten regional offices of the EPA have been delegated substantial decisionmaking authority with regard to the program areas under their jurisdiction. For further discussion of the advantages and problems of regionalization, see text accompanying notes 258-61 *infra*.

⁴¹ The sulfur dioxide control program promulgated by the EPA for Ohio, see note 26 *supra*, was an attempt to tailor emission limitations to the needs of each region in the state. Nevertheless, allegations that it constitutes "overkill" have been made. [1977] 8 ENVIR. REP. (BNA) (Current Developments) 866. Ohio's claim that the federal plan was too stringent and that it should have the opportunity to submit a substitute was rejected by the Court of Appeals for the Sixth Circuit, which noted that the state had already had ample opportunity to submit an acceptable plan but had failed to do so. *Cleveland Elec. Illuminating Co. v. EPA*, 572 F.2d 1150, 1156-57 (6th Cir. 1978). Design of the federal plan apparently consumed a large part of the resources of Region V's Air Programs Branch for over two years. Letter from David Kee (U.S. Environmental Protection Agency, Region V) to William Luneburg (Oct. 1, 1977).

⁴² Many states employed the "example region" approach in devising plans, that is, they applied regulations developed for highly polluted regions to areas where the air quality was not as seriously impaired. 1 U.S. ENVIRONMENTAL PROTECTION AGENCY, *NATIONAL SUMMARY OF STATE IMPLEMENTATION PLAN REVIEWS* 3 (1975) [hereinafter cited as *EPA PLAN REVIEW*].

litical process together with the dominance of certain economic interests can result in the state's devising less than an optimal allocation of emission reductions between regions and sources.⁴³ Nevertheless, in most cases, a state agency's knowledge of local conditions together with the impact on it of the constellation of political forces operating in the state are more likely to create equitable and economically defensible controls than an exclusively federal approach.⁴⁴

Vesting exclusive responsibility for plan formulation in the state or local governments is not much more attractive as an alternative in view of the demonstrated failure of many such governments to act when required to devise necessary emission reduction regulations under the 1970 Amendments.⁴⁵ The threat of federal promulgation in the face of state inaction remains essential, although it presents significant problems, particularly with respect to transportation control. Promulgation on such a case-by-case basis does not involve potential inefficiencies on the scale posed by total federal preemption and is preferable to having no plan at all.

Thus, the recent amendments to the law retain the dualistic responsibility for plan development.⁴⁶ Yet as long as that scheme remains in effect, every effort must be made to mitigate its potential for delay. Unfortunately the EPA has not always acted in accordance with that objective. A case in point is its suggestion to the Court of Appeals for the Seventh Circuit that a state plan must be revised and resubmitted for federal approval subsequent to state court invalidation of the regulations contained in the plan and, if the state fails to do so, the EPA must promulgate a substitute control strategy.⁴⁷ In the situation where a state court's ruling on the validity of the plan is handed down prior to the statutory deadline for the state's initial submittal of the regulations to the EPA, or even during the period of EPA review of the control strategy for compliance with the requirements of the Clean Air Act, that construction of the statute is a rea-

⁴³ See *Zerbe*, *supra* note 15, at 208.

⁴⁴ *Cf. id.* at 211 (noting that uniform standards are necessary).

⁴⁵ See note 39 *supra*. Nor was the failure of the states to devise adequate implementation plans confined to the transportation control area alone, as the events in Ohio illustrate. See text accompanying notes 23-28 *supra*.

⁴⁶ 42 U.S.C. § 1857c-5(a) (1970 & Supp. V 1975) (current version at 42 U.S.C.A. § 7410(a) (West Supp. 1978)).

While, as indicated in the text accompanying notes 93-132 *infra*, local government has been given an increased role in the plan development process, it is still the state on which the ultimate responsibility for plan formulation falls. 42 U.S.C.A. § 7407 (West Supp. 1978).

⁴⁷ *Indiana & Mich. Elec. Co. v. EPA*, 509 F.2d 839, 847 (7th Cir. 1975).

sonable one⁴⁸ and should not introduce excessive delay into the plan formulation process. Once a state plan is approved, however, the EPA's position unnecessarily creates the opportunity to stall establishment and federal enforcement of control strategies. The scheme of judicial review now in effect under the statute obviates the need for reformulation of a control strategy in the case of later state court invalidation.

EPA approval of state-adopted emission controls constitutes federal rulemaking,⁴⁹ thereby independently establishing a legal basis for those regulations as federal law. The validity of the plan under state law is relevant only because the statute itself makes that a criterion for federal approval of the plan.⁵⁰ Parties affected by the controls in the plan have sixty days following EPA approval to file a challenge to the EPA action pursuant to section 307(b)(1) of the Act⁵¹ in the United States court of appeals for the circuit encompassing the state to which the plan applies. Questions that can be raised and decided in that proceeding include not only whether the plan complies with federal statutory and constitutional standards, but also whether the plan is valid under state law.⁵² Any issue which can be litigated in the section 307 proceeding cannot be raised in federal or citizen enforcement proceedings.⁵³ Assuming, therefore, a state

⁴⁸ Cf. *Clean Air Coordinating Comm. v. Roth Adam Fuel Co.*, 465 F.2d 323, 326 (7th Cir. 1972), *cert. denied*, 409 U.S. 1117 (1973) (noting that EPA has an option in such circumstances to promulgate a strategy on its own within the time constraints of the statutory schedule).

⁴⁹ See, e.g., *Buckeye Power, Inc. v. EPA*, 481 F.2d 162, 170 (6th Cir. 1973).

⁵⁰ There must be an assurance that a state has adequate authority to carry out the plan. 42 U.S.C.A. § 7410(2)(F)(i) (West Supp. 1978). See also 40 C.F.R. § 51.11(a)(1) (1977).

Why Congress included that as one of the statutory criteria for an approvable plan is not clear. The Act requires that, if, when a plan is initially submitted, the EPA determines the state agency lacked authority under state law to adopt the regulations, it must promulgate a plan for the state. 42 U.S.C.A. § 7410(c) (West Supp. 1978). Regardless of the reason for the criterion when EPA approval has occurred and federal appellate remedies have been exhausted, see text accompanying notes 51-56 *infra*, it does not follow that Congress intended subsequent state court invalidations to affect the status of the plan as enforceable federal law. The legislative history of § 307(b)(2) of the statute, 42 U.S.C.A. § 7607(b)(2) (West Supp. 1978), indicates an intent to eliminate delays in air pollution abatement that would be caused by such a statutory interpretation. See text accompanying note 56 *infra*.

⁵¹ 42 U.S.C.A. § 7607(b)(1) (West Supp. 1978).

⁵² See *Luneburg & Roselle, Judicial Review Under the Clean Air Amendments of 1970*, 15 B.C. INDUS. & COM. L. REV. 667, 687-88 (1974). Technically, what the court of appeals reviews is whether the EPA made an arbitrary or capricious decision that the state had legal authority to adopt the regulations. *Id.* at 687.

⁵³ 42 U.S.C.A. § 7607(b)(2) (West Supp. 1978). Such foreclosure of judicial review has been held to be constitutional. *Lloyd A. Fry Roofing Co. v. EPA*, 554 F.2d 885, 892-93 (8th Cir. 1977); *Luneburg & Roselle, supra* note 52, at 679. But cf. *Adamo Wrecking Co. v. United States*, 434 U.S. 275, 289 (1978) (Justice Powell concurring and expressing doubt regarding the constitutionality of § 307(b)(2)).

plan is approved by the EPA and no section 307 action is filed or, if one is filed, the regulations survive the challenge in the court of appeals, the statute as presently drafted makes subsequent state court invalidation of the regulations irrelevant with respect to the continued status of the plan as enforceable federal law.⁵⁴

It might be argued that section 307 does not lead unambiguously to that result in that it permits the filing of a new challenge to a plan in the appropriate court of appeals if the petition is based "solely on grounds arising after such 60th day" of the plan's approval by EPA.⁵⁵ Subsequent state court invalidation probably does not constitute such new grounds. That a state court has issued a decision in the case is beside the point. Presumably the same state law issues could have been raised and decided in a section 307 challenge filed immediately after the EPA's approval of the state plan. Hence, there are no "new grounds" within the meaning of the provision. Moreover, the rationale behind section 307(b)(2)'s foreclosure of judicial review in the enforcement forum was elimination of the type of delay that might be caused by allowing state court action to open up the federal plan to possible invalidation where the issues could have been litigated and decided earlier.⁵⁶

If issues affecting the validity of a state plan under state law are raised in the court of appeals in a section 307 proceeding commenced within the statutorily limited time after EPA approval of the regulations, and, at the same time, a state court proceeding is pending which involves the identical questions, abstention by the federal court in deciding the state, though not the federal, issues might be appropriate.⁵⁷ As long as the stay of the section 307 proceeding is conditioned on the state court's acting expeditiously, this approach should not introduce significant additional delay into the plan formulation process.

While the Seventh Circuit apparently relied to some extent on the EPA approach to state court invalidation in upholding federal approval of the Illinois and Indiana plans,⁵⁸ it is possible that it might not adopt that construction of the statute if squarely confronted with the issue of the continued enforceability of federally approved state regulations invalidated by state courts. At any rate,

⁵⁴ See *Luneburg & Roselle*, *supra* note 52, at 691-92.

⁵⁵ 42 U.S.C.A. § 7607(b)(1) (West Supp. 1978).

⁵⁶ See *Luneburg & Roselle*, *supra* note 52, at 672-79.

⁵⁷ More precisely, the state court decision could indicate whether the EPA's decision on the state law issues was "arbitrary or capricious." See note 52 *supra*.

⁵⁸ *Indiana & Mich. Elec. Co. v. EPA*, 509 F.2d 839, 847 (7th Cir. 1975).

other circuits have yet to deal with the problem. EPA itself appears to be uncertain whether it wishes to maintain its previously articulated position.⁵⁹

In order to eliminate further controversy regarding the effect of state court action on the status of federally approved plans, the statute could be amended to eliminate the validity of plans under state law as a criterion for federal approval. As noted above,⁶⁰ EPA approval, as rulemaking, establishes an independent legal basis for the regulations as enforceable federal law. Such an approach would retain the advantages of having the state, with its more detailed knowledge of local conditions, design the applicable emission reduction regulations.

This proposal has its problems, though they are not insurmountable. EPA approval under the statute as presently drafted merely represents its judgment that the plan meets the requirements of the Clean Air Act. It does not represent its judgment that the particular set of controls chosen should be adopted.⁶¹ That decision is for the state agency to make.⁶² Furthermore, section 116 of the statute⁶³ authorizes states to adopt plans more stringent than necessary to attain the federal ambient standards. Moreover, under the proposal at issue without any additional statutory changes, federal judicial review could not go beyond determining that EPA approval met federal statutory and constitutional standards. In short, if the suggested change in the statute were made, the only standards that could be applied at the federal level to control the discretion of the state agency in formulating a plan that would retain its enforceability, regardless of its validity under state law, would be the federal statutory requirement that the plan be sufficient to attain the standards within the time frame mandated by Congress⁶⁴ and the constitutional prohibitions against denial of equal protection of the law and denial of due process.⁶⁵ This *de facto* delegation of authority to the states may not be lawful.⁶⁶ Even if it would be, there is the serious policy

⁵⁹ Various discussions with EPA personnel during January, 1978, indicated to the author that the EPA was perhaps reconsidering its position on this matter.

⁶⁰ See text accompanying note 49 *supra*.

⁶¹ See *Union Elec. Co. v. EPA*, 427 U.S. 246 (1976).

⁶² *Id.*

⁶³ 42 U.S.C.A. § 7416 (West Supp. 1978).

⁶⁴ 42 U.S.C.A. § 7410(d)(2)(A) (West Supp. 1978).

⁶⁵ U.S. CONST. amend. XIV, § 1.

⁶⁶ See K. DAVIS, *ADMINISTRATIVE LAW OF THE SEVENTIES* 20-39 (1976), for a general discussion of whether statutory standards are necessary to guide the exercise of discretionary power. The cases appear to be split on that issue. Professor Davis advocates that, for the

question whether the state agency would be subject to sufficient accountability in the circumstances. In order to remove such objections, the statute would have to be further amended to impose some type of additional federal standard on the state agency's substantive decisionmaking authority policed by section 307 proceedings.⁶⁷ This approach would, however, arguably narrow the state's option under section 116, which the states have to date sought jealously to protect.⁶⁸

In addition to its suggesting the statutory construction discussed previously, the EPA has also injected delays into the plan formulation process through administrative inaction in a considerable number of instances. For example, in the cases of Ohio, Illinois, and Indiana previously described,⁶⁹ it did not act promptly to promulgate federal implementation plans when the states failed to submit revised plans meeting the statutory criteria.⁷⁰ With respect to Indiana and Illinois, of course, it was the EPA's own construction of the Act discussed above that suspended the plans, requiring some action by the state or the EPA to reestablish federally enforceable regulations.

In view of the political problems that may impede a state's enforcement of a federally promulgated plan,⁷¹ together with the lack of resources and the other limitations that hinder both federal development of a plan suited to local needs and federal enforcement against all sources in the state,⁷² promulgation is not a step to be taken lightly. Particularly in the area of control of transportation-related pollutants, the impact of a federal plan on people's lifestyles

requirement of statutory standards, the courts should substitute a requirement of administrative standards, "so that an administrator will be forbidden to exercise discretionary power in an individual case unless he has done what he reasonably can do to formulate, through rulemaking or otherwise, standards to guide his determination." *Id.* at 20.

⁶⁷ When a state-devised plan is no more stringent than necessary to attain the national ambient air quality standards within the time frame mandated by Congress, the standard applied might merely be that the state agency's allocation of allowable emission reductions not be "arbitrary or capricious." If the state agency exercises the § 116 option to design controls more stringent than necessary to attain the ambient standards, the standard could, in addition, require that the decision give appropriate consideration to, *inter alia*, social, economic, and energy factors.

⁶⁸ See sources cited in note 176 *infra*.

⁶⁹ See text accompanying notes 23-34 *supra*.

⁷⁰ *Id.* For example, in Illinois the appellate court decision in Commonwealth Edison Co. v. Pollution Control Bd., 25 Ill. App. 3d 271, 323 N.E.2d 84 (1974), *aff'd on other grounds*, 62 Ill. 2d 494, 343 N.E.2d 459 (1976), was handed down in December, 1974. Even after the Illinois Supreme Court's affirmance in 1976, no federal promulgation was forthcoming.

⁷¹ See text accompanying notes 152-53 *infra*.

⁷² See text accompanying notes 38-43 *supra*.

is likely to be so significant that promulgation could prove to be an empty gesture.⁷³ Yet the costs from the point of view of public health and welfare which are imposed where there is no enforceable plan at all may in many cases outweigh the "benefits" of inaction. If the EPA does not wish or is unable to enforce the plan it would have to promulgate, at least private citizens should not be denied the opportunity expressly granted to them by section 304 of the Act⁷⁴ to force sources to comply with emission limitations necessary to attain healthful air quality levels. In short, when a state plan is not submitted on time, the EPA should do what the statute provides, that is, promptly prepare and promulgate a substitute.⁷⁵ The state retains the right to submit an alternative plan if it wishes. In fact, EPA action may spur the state to act.⁷⁶ As will be noted below, the 1977 Amendments have introduced various additional incentives for states to adopt plans on their own.⁷⁷

The Role of Local Government

Neither the 1970 Amendments nor the EPA's original regulations implementing their requirements explicitly delineated the role local government was to play in formulating and enforcing emission control strategies.⁷⁸ Each state was to have responsibility for allocat-

⁷³ See note 39 *supra*.

⁷⁴ 42 U.S.C.A. § 7604 (West Supp. 1978).

⁷⁵ 42 U.S.C.A. § 7410(c)(1) (West Supp. 1978).

⁷⁶ In California, for example, EPA promulgation of transportation control plans served to prompt state and local governments to develop alternative plans on their own. See note 84 *infra*.

⁷⁷ See text accompanying notes 310-18 *infra*.

⁷⁸ The states were given the primary responsibility for assuring air quality meeting the national ambient standards. 42 U.S.C. § 1857c-2(a) (1970) (current version at 42 U.S.C.A. § 7407(a) (West Supp. 1978)). Other scattered references to local participation appeared elsewhere in the statute. See, e.g., 42 U.S.C. § 1857(a)(3) (1970) (abatement of air pollution is the primary responsibility of state and local governments); *id.* § 1857c-1 (1970) (current version at 42 U.S.C.A. § 7401(a)(3) (West Supp. 1978)) (local government to be represented in interstate agencies receiving federal grant funds).

The EPA's original regulations governing the development of implementation plans were similarly obscure on the role of local government. See, e.g., 36 Fed. Reg. 15,485, 15,489 (1971) (§ 420.11(f) allowed a state to authorize a local agency to carry out a plan or portion thereof within the local agency's jurisdiction); *id.* at 15,493 (§ 420.21(b)(1) provided that each plan was to identify the local agencies, if any, which were authorized to participate in carrying out the plan).

See generally Grad, *Intergovernmental Aspects of Environmental Controls*, in F. GRAD, G. RATHJEMS, & A. ROSENTHAL, *ENVIRONMENTAL CONTROL: PRIORITIES, POLICIES, AND THE LAW* (1971) (describing the increasing state role in air pollution control prior to 1970 under the impact of federal legislation).

ing the work between itself and its governmental units.⁷⁹ The omission of a role for local government was brought into sharp focus by federal promulgation of transportation control plans without prior consultation with local governments, many times in direct conflict with ongoing or proposed local programs,⁸⁰ and the growing federal presence in the area of land use regulation for air pollution control.⁸¹

⁷⁹ 1977 HOUSE REPORT, *supra* note 10, at 313. Local governments did, however, participate to some extent in the original formulation of some implementation plans. *See Implementation of the Clean Air Act Amendments of 1970 (Part I), Hearings Before the Subcomm. on Air & Water Pollution of the Senate Comm. on Public Works*, 92d Cong., 2d Sess. 340-44 (1972) [hereinafter cited as *1970 Amendments Hearings (I)*] (statement of Robert Walker). Nevertheless, even in 1972, complaints began to be voiced regarding the need for a more substantial local government role in the implementation process. *Id.* at 348 (statement of Thomas Bliley).

⁸⁰ *See, e.g., Implementation of the Clean Air Act—1975 (Part I), Hearings Before the Subcomm. on Environmental Pollution of the Senate Comm. on Public Works*, 94th Cong., 1st Sess. 159 (1975) [hereinafter cited as *Clean Air Act Hearings (I)*] (statement of Russell Train, EPA Administrator); *Controls Hearings (III)*, *supra* note 39, at 745-46 (study by J. Fensterstock & D. Speaker); *Clean Air Act Oversight—1973 (Part II), Hearings Before the Subcomm. on Public Health and Environment of the House Comm. on Interstate and Foreign Commerce*, 93d Cong., 1st Sess. 856-57 (1973) [hereinafter cited as *1973 Oversight Hearings (II)*] (statement of Pete Wilson). *See also* R. SANSOM, *supra* note 39, at 163.

⁸¹ One group of these regulations, the so-called "indirect source" controls, were essentially requirements for preconstruction review of facilities whose operation would generate automobile traffic and therefore result in an increase in carbon monoxide and photochemical oxidant concentrations in the ambient air. Parking facilities, sports complexes, shopping centers, airports, and highways were among the types of sources so regulated. The purpose of the regulations was to ensure that such facilities were not built where they would jeopardize the maintenance of the national ambient standards once those standards were attained. Since most states did not submit approvable indirect source controls, the EPA was forced to promulgate them. 40 C.F.R. § 52.22(b) (1977). In 1977 Congress imposed significant restrictions on the EPA's authority to require that such controls be imposed. 42 U.S.C.A. § 7410(a)(5) (West Supp. 1978).

Another group of federally mandated land use regulations were those requiring long-term planning in certain designated areas to ensure that the ambient air quality standards would be maintained. 40 C.F.R. §§ 51.40-.63 (1977).

Finally the EPA promulgated regulations aimed at the prevention of significant deterioration of air quality currently superior to the national ambient standards. 40 C.F.R. § 52.21 (1977). Since those regulated the location of new sources, such controls clearly constituted land use planning. Congress significantly modified this scheme in 1977. 42 U.S.C.A. §§ 7470-7479 (West Supp. 1978). For further discussions of the nondeterioration provisions, see text accompanying notes 127-129 and 183-92 *infra*.

The lack of federal funds to assist local government in implementing federally required controls was a further source of irritation. *See, e.g., Implementation of Transportation Controls (Part II), Hearings Before the Subcomm. on Environmental Pollution of the Senate Comm. on Public Works*, 93d Cong., 2d Sess. 9 (1974) [hereinafter cited as *Controls Hearings (II)*] (Mayor Bradley of Los Angeles notes a need for federal funding of mass transit alternatives to automobiles); *Controls Hearings (III)*, *supra* note 39, at 777-78 (study by M. Manheim & E. Bennett). Also, since the federal government had assumed exclusive responsibility, except in California, for setting emission standards for new cars, 42 U.S.C.A. § 7543 (West Supp. 1978), the periodic extensions by the EPA and Congress of the deadlines for meeting those standards

Local government vociferously protested to Congress its exclusion from the implementation process, as well as the federal impingement on its traditional zoning prerogatives in the name of clean air.⁸² Testimony of local officials showed, moreover, that the hostility of local government to the federal initiatives was matched, if not exceeded, by their hostility to the state preemptive conduct in air quality control.⁸³ It became increasingly evident that substate units of government not only desired a substantial role in air pollution control where the restrictions affected their interests but also wanted the federal government to ally itself with them against any state efforts to diminish that role.

Commencing in 1973 and 1974, therefore, the EPA became increasingly sensitive to the place of local government in the implementation process and attempted to design its regulations accordingly. In a few cases the EPA was able to work with states and their subdivisions in devising elements of transportation plans which could be substituted for parts of EPA-promulgated controls.⁸⁴ Unfortunately, this was the exception rather than the rule. The

put unwelcomed additional pressure on the cities and states to take up the slack by imposing more stringent transportation controls. See, e.g., *Clean Air Act Hearings (I)*, *supra* note 80, at 680.

⁸² *Clean Air Act Amendments of 1977 (Part I)*, *Hearings Before the Subcomm. on Environmental Pollution of the Senate Comm. on Environment and Public Works*, 95th Cong., 1st Sess. 99 (1977) [hereinafter cited as *1977 Amendments Hearings (I)*]; *Clean Air Act Hearings (I)*, *supra* note 80, at 678-79, 687, 1078; *Clean Air Act Oversight (Part II)*, *Hearings Before the Subcomm. on Environmental Pollution of the Senate Comm. on Public Works*, 93d Cong., 2d Sess. 900, 901, 913, 927-32, 936 (1974) [hereinafter cited as *1974 Oversight Hearings (II)*]; *Environmental Protection Agency's Budget Request for Fiscal Year 1975, Hearings Before the Subcomm. on Environmental Pollution of the Senate Comm. on Public Works*, 93d Cong., 2d Sess. 49 (1974) [hereinafter cited as *1974 Budget Hearings*]; *1973 Oversight Hearings (II)*, *supra* note 80, at 835-36, 839-40, 849, 851, 870.

See also Marcus, *Clean Air in Search of a Comprehensive National Plan: An Urban View*, 8 URB. LAW. 307 (1976). But see Sterling, *A Local Government Viewpoint, How Do We Really Stand With the Clean Air Act?*, 23 J. AIR POLL. CONT. A. 837, 841 (1973) (a generally favorable view by one local air pollution control official as to the place of local government in control efforts under the 1970 Amendments).

⁸³ See, e.g., *1977 Amendments Hearings (I)*, *supra* note 82, at 102; *Clean Air Act Amendments of 1977 (Part IV)*, *Hearings Before the Subcomm. on Environmental Pollution of the Senate Comm. on Public Works*, 95th Cong., 1st Sess. 63-64 (1977); *Clean Air Act Hearings I*, *supra* note 80, at 678-79, 687, 729; *1974 Oversight Hearings (II)*, *supra* note 82, at 901; *1973 Oversight Hearings (II)*, *supra* note 80, at 851.

See also C. JONES, *supra* note 15, at 221 (noting that federal emphasis on the responsibilities of the states increased the potentiality for state-local conflict).

⁸⁴ *Implementation of Transportation Controls (Part I)*, *Hearings Before the Subcomm. on Air and Water Pollution of the Senate Comm. on Public Works*, 93d Cong., 1st Sess. 362-70 (1973) [hereinafter cited as *Controls Hearings (I)*]; *Controls Hearings (II)*, *supra* note 81, at 13-19; *Clean Air Act Amendments—1975 (Part I)*, *Hearings Before the Subcomm. on Health and the Environment of the House Comm. on Interstate and Foreign Commerce*, 94th Cong., 1st Sess.

EPA further responded by carving out a substantial area for local responsibility in the rapidly expanding sphere of federally mandated land use regulation for air quality control. The requirements involved were those relating to preconstruction review of indirect sources of air pollution and new source review to prevent significant deterioration of air quality currently cleaner than the national standards.⁸⁵ The Agency provided for delegation of its authority to local governments to administer such federally promulgated controls.⁸⁶ It also required "consultation" with concerned substate units in the formulation of long-term growth plans needed for maintenance of levels of air quality meeting the national standards,⁸⁷ as well as revisions of implementation plans for attainment of those standards.⁸⁸

In addition, the EPA mandated "coordination" in planning between state and local air quality control agencies and other agencies operating under different policy directives.⁸⁹ Given the maze of substate units of government together with the number of state and federal programs being implemented at those levels, requiring coordination and consultation on the one hand, and achieving it on the other, were worlds apart.⁹⁰ The situation was further compli-

614 (1975). See also DeFalco, *Regional Goals, Concurrent State and Federal Actions: Sense or Nonsense*, 26 J. AIR POLL. CONT. A. 837, 839-40 (1976).

⁸⁵ See note 81 *supra*.

⁸⁶ 40 C.F.R. § 52.22(b)(14) (1977) (indirect source delegation); 39 Fed. Reg. 7,270, 7,274-75 (1974). But see G. HAGEVIK, D. MANDELKER, & R. BRIL, *AIR QUALITY MANAGEMENT AND LAND USE PLANNING, LEGAL, ADMINISTRATIVE, AND METHODOLOGICAL PERSPECTIVES* 29 (1974) (noting that, while indirect source regulations gave a regional perspective to land use planning, regional agencies with substantial land use planning authority generally did not exist to accept the delegations).

For provisions relating to delegation in the nondeterioration area, see 40 C.F.R. § 52.21(f) (1977); 39 Fed. Reg. 31,000, 31,000-01 (1974).

⁸⁷ 40 C.F.R. § 51.58(b)(2) (1977). See also 40 C.F.R. § 52.22(b)(14)(i) (1977) (agencies administering EPA-promulgated indirect source regulations must consult with local land use planning agencies).

⁸⁸ 40 C.F.R. §§ 51.12(i), .40(c), .58(b)(2) (1977).

⁸⁹ See, e.g., 40 C.F.R. § 51.58(c)-(d) (1977) (organization developing AQMA plan must coordinate with other agencies affecting or affected by the plan).

⁹⁰ See, e.g., Lugar, *Local Government Modernization*, in *AMERICAN FEDERALISM: TOWARD A MORE EFFECTIVE PARTNERSHIP, A REPORT OF AND PAPERS FROM THE NATIONAL CONFERENCE OF AMERICAN FEDERALISM IN ACTION* 44-49 (1975); Vardaman, *Federal Environmental Statutes and Transportation*, in *FEDERAL ENVIRONMENTAL LAW* 1316, 1328-29 (1974) (noting fragmentation in transportation planning at all levels of government and lack of comprehensive policy); [1976] 7 ENVIR. REP. (BNA) (Current Developments) 1957 (General Accounting Office finds a multitude of areawide planning agencies on the local and state level, many of which were created by federal programs, and notes the lack of coordination between them). See generally *Controls Hearings (III)*, *supra* note 39, at 667-735 (an excellent study of the institutional problems, including lack of intergovernmental cooperation and coordination, encountered in devising a transportation plan for the Washington, D.C., area).

cated by the fact that the 1970 Amendments required regulation and planning which, while allowing consideration of other factors, elevated attainment and maintenance of certain levels of air quality to a position of primacy in cases where air quality goals and other interests conflicted.⁹¹ Finally, there was some question regarding the extent of the EPA's legal authority under the 1970 Amendments to enforce compliance with the regulations requiring coordination and consultation.⁹²

One of the principal changes wrought by the 1977 Clean Air Act Amendments has been the institutionalization of the role of local government in the scheme for air pollution control.⁹³ In view of Congress's belief that implementation and enforcement of plans at the local level is preferable to direct federal involvement,⁹⁴ any general purpose unit of local government may now be delegated the EPA's authority to implement and enforce regulations promulgated by the EPA after a state fails to submit an approvable implementation plan.⁹⁵ Moreover, such a delegation can apply to any of the plans the EPA is authorized to promulgate under the statute.⁹⁶

Before there can be a delegation, however, the local government must have "adequate authority under State or local law."⁹⁷ Since Congress viewed delegation to local governments as a remedy for a state's failure to implement a federal plan,⁹⁸ it is difficult to believe

⁹¹ As indicated in the text accompanying note 20 *supra*, Congress required the attainment of the national ambient air quality standards by certain dates. It had determined that public health was of paramount importance and, if sources could not meet the standards set by the law, they had to be closed down. S. REP. NO. 1196, 91st Cong., 2d Sess. 2-3 (1970) [hereinafter cited as 1970 SENATE REPORT]. See Comment, *Land Use/Transportation Controls for Air Quality*, 6 URB. LAW. 238 (1974) [hereinafter referred to as URBAN LAWYER Comment] for an examination of ways to integrate air quality considerations into land use planning.

⁹² Cf. *Union Elec. Co. v. EPA*, 427 U.S. 246 (1976) (even if a state plan was technologically and/or economically infeasible, EPA cannot reject it). That case turned on the mandatory duty of EPA to approve a state implementation plan if it met the requirements of 42 U.S.C.A. § 7410(a)(2) (West Supp. 1978). Other than possibly subsection 7410(a)(2)(E), none of those requirements related to the state's involving substate units in plan formulation. Even that subsection, which refers to "intergovernmental cooperation," appears to apply primarily to intrastate and interstate coordination in cases where pollutants migrate from one region to another.

⁹³ Congress's recognition of the demands of local government for a substantial role in air pollution control is seen, for example, in S. REP. NO. 127, 95th Cong., 1st Sess. 10, 23-24, 38 (1977) [hereinafter cited as 1977 SENATE REPORT]; 1977 HOUSE REPORT, *supra* note 10, at 1, 26, 313-16.

⁹⁴ See, e.g., 1977 HOUSE REPORT, *supra* note 10, at 316.

⁹⁵ Clean Air Amendments, § 108(d)(3), 42 U.S.C.A. § 7410(c)(3)-(5) (West Supp. 1978).

⁹⁶ *Id.* The delegation can apply to "any part of a plan promulgated under this subsection."

⁹⁷ *Id.*

⁹⁸ 1977 HOUSE REPORT, *supra* note 10, at 315-16.

that it intended utilization of this provision to depend on the state's express authorization of the local government to carry out the plan. Perhaps what the provision contemplates is the situation where, without additional state legislation, the local government already possesses authority to enact ordinances similar to the federal regulations but, for one reason or another, chooses not to exercise that authority. Instead, the local government relies on the federal delegation to support its implementation of the federal plan. Such a construction of the delegation provision would be similar to that adopted by the EPA with regard to other sections of the law.⁹⁹ Alternately, while the state may have failed to submit an approvable implementation plan, the local government may have adopted regulations mirroring the federally promulgated ones. Delegations in the latter circumstance would amount to no more than the federal government's giving the local unit the first option to implement and enforce the controls.¹⁰⁰ Failure of the local government to act would result in resumption of the federal role in plan administration and enforcement.¹⁰¹

The 1977 Amendments also attempt to improve communications between federal, state, and local governments. Section 121 of the statute now provides that, after August 1978, state formulation of implementation plans must include a process of consultation with general-purpose local governments, designated organizations of elected officials of local governments, and certain federal officials having authority over federal land.¹⁰² Such a consultation process will apply to those parts of implementation plans which relate directly to the interests of local government.¹⁰³ Where a state fails to adopt a process sufficient to "assure adequate consultation," the EPA

⁹⁹ See text accompanying note 135 *infra*. Those provisions do not, however, explicitly require that the agency receiving the delegation have "authority under state or local law."

¹⁰⁰ This has been the effect of federal delegation in the case of federally promulgated new source standards. See text accompanying note 137 *infra*.

¹⁰¹ This provision may not be totally effective in achieving its purpose of having federally promulgated plans carried out on the local level. The federal plan may require for its success the involvement of other than general-purpose local governments, but those are the only units authorized to receive the delegation. See 1977 HOUSE REPORT, *supra* note 10, at 316 (noting that the "term 'general purpose unit of local government,' as used in the committee bill would not include regional agencies or area-wide councils of governments"). It was the House provision for delegation that was incorporated in the bill as finally enacted. H.R. REP. NO. 564, 95th Cong., 1st Sess. 128 (1977) [hereinafter cited as 1977 CONFERENCE REPORT].

¹⁰² Clean Air Amendments, § 119, 42 U.S.C.A. § 7421 (West Supp. 1978).

¹⁰³ For example, transportation controls, air quality maintenance plans, prevention of significant deterioration, and plans for areas where ambient pollutant levels are currently above the national standards. *Id.*

must promulgate one for the state.¹⁰⁴ EPA regulations will define the parameters of an adequate process.¹⁰⁵ General-purpose units of local government, regional agencies, and councils of government (but apparently no other substate units) may appeal both EPA approval and promulgation of the process for the state where they are located to the appropriate United States court of appeals.¹⁰⁶ They may similarly appeal EPA approval and promulgation of implementation plans where the state or the EPA allegedly disregards the applicable process in devising a plan.¹⁰⁷ Other than such provisions for judicial review, the statute is not explicit regarding the procedure envisioned to remedy a state's violation of the applicable consultation process in the plan formulation stage. Upon state submittal of a control strategy to the EPA and the determination that a consultation violation occurred in designing it, the EPA could return the plan to the state to correct the violation. If the state then refused to take the necessary action, the EPA's enforcement authority under section 113¹⁰⁸ might be available to compel compliance with the section 121 process.¹⁰⁹ Alternately, the EPA itself could "consult" with the affected local governments in the manner required by the applicable

¹⁰⁴ *Id.* § 108(b), (d)(1), 42 U.S.C.A. § 7410(a)(2) (West Supp. 1978). The first cited section adds the consultation process as a required part of an implementation plan. The second, § 108(d)(1), is an amendment to the statutory provision allowing EPA promulgation in the event a state fails to submit the required sections of a plan and explicitly refers to the instance of EPA promulgation of a consultation process. See also 1977 CONFERENCE REPORT, *supra* note 101, at 141; 1977 HOUSE REPORT, *supra* note 10, at 315.

¹⁰⁵ The proposed EPA regulations under § 121 (43 Fed. Reg. 21,466 (1978)) do not specify in detail the elements of an adequate consultation process; rather they broadly set forth the objectives of a satisfactory process. As envisioned by EPA, each process must ensure that affected organizations have substantial opportunity to express their opinions and concern during implementation plan development. *Id.* at 21,468. The proposed regulations do not require consultation during the period when plans are carried out, though a prior draft of the regulations had mandated consultation at that stage. Memorandum (with attachments) from John O. Hidingier (Director, Office of Transportation and Land Use Policy, EPA) to John Silvasi, et al. (Nov. 23, 1977) (in possession of author). The position taken in the latter document is supported by the analysis developed in the text accompanying notes 110-17 *infra*. The regulations are drafted to assure not only local input in air quality decisionmaking, but also coordination of programs having different policy orientations than air pollution control.

¹⁰⁶ 42 U.S.C.A. § 7421 (West Supp. 1978). See also 1977 HOUSE REPORT, *supra* note 10, at 315. Such an appeal would be filed pursuant to 42 U.S.C.A. § 7607(b)(1) (West Supp. 1978).

¹⁰⁷ 42 U.S.C.A. § 7421 (West Supp. 1978). See also 1977 HOUSE REPORT, *supra* note 10, at 315. While the language of the statute is not altogether clear on the point, the purpose of this provision would seem to require both the state and the EPA to comply with the applicable process in devising plans, regardless of which governmental level, federal or state, initially formulated the process.

¹⁰⁸ 42 U.S.C.A. § 7413 (West Supp. 1978).

¹⁰⁹ Federal enforcement applies to violations of "requirements of applicable implementation plans." *Id.* § 7413(a)(1). The consultation process is part of such plans. *Id.* § 7410(a)(2).

consultation process prior to approving the plan. If, however, such consultation indicates that changes should be made in the control strategy in order, for example, to accommodate local programs, the EPA is perhaps required to promulgate a revised plan where the state refuses to make the modifications proposed by the local governments. Such a result would mean, of course, that section 121 requires more of the states than merely listening to the views of substate units.

The statute does not clearly indicate whether such a consultation process must apply to implementation and enforcement of a plan in other than certain specified aspects,¹¹⁰ though the legislative history,¹¹¹ as well as the rationale for the consultation provisions¹¹² creates a strong argument that consultation should take place beyond the initial plan formulation stage. The statute, as amended, provides that any final action of the EPA Administrator, if locally or regionally applicable, may be appealed under section 307 of the statute.¹¹³ It would appear, therefore, that actions of the EPA in implementing a plan (for example, where it administers a traffic reduction regulation) might be reviewable in a United States court of appeals in cases of violation of the applicable consultation process. At the same time, a suit pursuant to section 304 of the Act¹¹⁴ in the federal district courts appears to be an alternative route to obtain review of such violations by the EPA on the basis of an EPA failure to perform a nondiscretionary duty under the Act.¹¹⁵ On the other hand, local governments complaining of violations of the applicable consultation process by a state during the implementation or enforcement stage would appear best advised to sue the state in federal district court under general federal question jurisdiction,¹¹⁶ or section 304,¹¹⁷ or both.

¹¹⁰ The consultation process applies to the issuance of so-called delayed compliance orders, *see* notes 352-60 *infra*, as well as preconstruction review of direct sources of air pollution.

¹¹¹ *See* 1977 HOUSE REPORT, *supra* note 10, at 314 (process to apply to both "planning and implementation").

¹¹² *Id.* (assures representation of the local viewpoint in air pollution control).

¹¹³ 42 U.S.C.A. § 7607(b)(1) (West Supp. 1978).

¹¹⁴ *Id.* § 7604. As "persons" within the meaning of this provision, *id.* § 7602(c), political subdivisions would appear to be able to invoke this provision.

¹¹⁵ 42 U.S.C.A. § 7604(a)(2) (West Supp. 1978).

¹¹⁶ 28 U.S.C. § 1331 (1976). This assumes, of course, that the jurisdictional amount requirement can be satisfied and a "private" right of action to enforce the statutory requirements can be implied, given the congressional purpose behind § 121 to guarantee local government a role in the implementation process. *See, e.g.*, 1977 HOUSE REPORT, *supra* note 10, at 314 (implying a right of action on the part of local governments should be a foregone conclusion).

¹¹⁷ 42 U.S.C.A. § 7604 (West Supp. 1978). In order to establish the basis for suit under that

For at least some observers, the innovations introduced by section 121 will not be welcome. It is a clear example of what has been called the New Structuralism,¹¹⁸ that is, the federal government's re-ordering the structure and functioning of state and local government. In view of the Supreme Court's newly found solicitude for the protection of states from federal intrusion,¹¹⁹ one has to consider whether this new initiative does not present significant constitutional questions, at least in the case of EPA promulgation of a process for a state.¹²⁰ Aside from such legal issues, the practical problems in administering this provision may prove to be particularly thorny in those cases where the EPA has to devise a consultation process for a state failing to submit an adequate one. The EPA will then find itself in an area not suitable for nationally uniform solutions, but rather requiring a detailed knowledge of local governmental structure, functions, and other conditions.¹²¹

Finally, the 1977 legislation introduced two other innovations which relate to the role of substate units. First, for any area where the national primary air quality standards for carbon monoxide or photochemical oxidants will not be attained by July 1, 1979, the state and local governments must determine jointly their respective responsibilities for planning, implementing, and enforcing a revised

provision, the political subdivision would have to argue that violation of the process was a violation of an "emission standard or limitation" within the meaning of *id.* § 7604(f). Since that term now includes requirements under an implementation plan relating to transportation control measures and air quality maintenance plans, and the statute specifically requires a consultation process applicable to such types of controls, that argument appears to have a substantial chance of success.

¹¹⁸ See Nathan, *The New Federalism Versus The Emerging New Structuralism*, 5 PUBLIS (No. 3) 111 (1975).

¹¹⁹ See *National League of Cities v. Usery*, 426 U.S. 833 (1976) (1974 amendments to the Fair Labor Standards Act extending its minimum wage and maximum hour provisions to almost all employees of states and their political subdivisions were held to be not within the authority granted Congress by the commerce clause insofar as they operated directly to displace states' ability to structure employer-employee relationships in areas of traditional governmental functions).

¹²⁰ Compare *Brown v. EPA*, 521 F.2d 827 (9th Cir. 1975), *vacated on other grounds*, 431 U.S. 99 (1977), with other cases cited in note 295 *infra* (courts of appeals held that the EPA did not have authority to impose sanctions on the state for failure to comply with EPA regulations). As indicated in text accompanying notes 109, 116, and 117 *supra*, both the EPA and local governments (along with private citizens) may be able to compel a state agency to consult. Where a state has designed its own consultation process which the EPA has approved, compelling state compliance therewith may present no constitutional problems. Cf. *Friends of the Earth v. Carey*, 552 F.2d 25 (2d Cir.), *cert. denied*, 434 U.S. 902 (1977) (New York City waived its right, in a § 304 suit, to assert that aspects of its transportation control plan violated the City's tenth amendment rights since the city did not raise these issues in a petition for review after EPA approval of the plan).

¹²¹ See Nathan, *supra* note 118, at 125.

transportation plan to attain those standards.¹²² Where possible, such plans must be prepared by an organization of elected officials of local governments designated by agreement of the governments in the affected area.¹²³ In the absence of such an agreement, the governor of the state must designate such an organization or a state agency to prepare the plan.¹²⁴ Failure to submit an approvable plan, however, still activates the federal promulgation¹²⁵ so vigorously opposed by local governments under the 1970 Amendments.¹²⁶ Second, the consent of certain local governments is a condition precedent to state reclassification of an area whose air quality is currently better than the national standards¹²⁷ from one where "moderate" levels of air quality deterioration are allowed to one where more serious deterioration is permissible.¹²⁸ This gives local government in the area proposed for redesignation the power to limit new industrial development if it places a higher value on clean air. No such veto applies, surprisingly enough, where a state wishes to reduce allowable degradation in a region.¹²⁹

¹²² Clean Air Amendments, § 129(b), 42 U.S.C.A. § 7504 (West Supp. 1978).

¹²³ *Id.* In order to head off formation of still other planning agencies at the substate level and to assist in the coordination of federal programs, the new section goes on to provide as follows:

(a) Where feasible, such organization shall be the metropolitan planning organization designated to conduct the continuing, cooperative and comprehensive transportation planning process for the area under section 134 of title 23, United States Code, or the organization responsible for the air quality maintenance planning process under regulations implementing this section, or the organization with both responsibilities.

(b) The preparation of implementation plan provisions under this part shall be coordinated with the continuing, cooperative, and comprehensive transportation planning process required under section 134 of title 23, United States Code, and the air quality maintenance planning process required under section 110, and such planning processes shall take into account the requirements of this part.

¹²⁴ *Id.*

¹²⁵ *See id.* § 129(b), 42 U.S.C.A. § 7502(b)(1) (West Supp. 1978); *id.* § 129(c), 42 U.S.C.A. § 7502 note (West Supp. 1978). *See also* 123 CONG. REC. S13702 (daily ed. Aug. 4, 1977) (statement of Sen. Muskie referring to nonattainment areas).

¹²⁶ *See, e.g., 1973 Oversight Hearings (II), supra* note 80, at 855-60.

¹²⁷ Clean Air Amendments, § 127(a), 42 U.S.C.A. § 7474(a)(2)(A) (West Supp. 1978). The local governments with standing to object are the general-purpose units of local government representing a majority of the residents in the area to be redesignated. *Id.*

EPA regulations in effect prior to the 1977 Amendments made no provision for such a veto by local government. *See* 40 C.F.R. § 52.21(c)(3)(ii)(e) (1977) (consultation with local government required).

¹²⁸ Permissible air quality deterioration depends upon the region's classification into one of three categories: Class I (some deterioration allowed), Class II (moderate deterioration allowed), and Class III (serious deterioration allowed). Thus, local consent is required for a reclassification from Class I or Class II to Class III. The allowable air quality deterioration increments applicable to the various areas are set out at 42 U.S.C.A. § 7473 (West Supp. 1978).

¹²⁹ That is, where a Class III designation is changed to Class II, or a Class II changed to Class I. 42 U.S.C.A. § 7474 (West Supp. 1978).

While on paper local governments have been given an expanded opportunity for participation in air quality regulation, experience under the statute may significantly disappoint those governments as well as Congress.¹³⁰ The technical complexity of many provisions of the 1977 Amendments, including those related to areas where standards are not currently being met,¹³¹ could in fact result in an increasing state, if not federal, dominance due to a lack of local expertise and funding necessary for taking part fully in the regulatory process.¹³²

Enlargement of State Authority

In both the 1970 and 1977 Amendments to the Clean Air Act, Congress has attempted to enlarge the legal authority of state agencies to deal with air pollution. Implementation of the relevant statutory provisions has not, however, been without serious problems.

New Source Performance Standards and Emission Standards for Hazardous Air Pollutants.—The EPA Administrator is empowered to delegate to a state “any authority he has under this [Act] to implement and enforce” the emission standards applicable to certain designated categories of sources which are promulgated by the EPA pursuant to the New Source Performance Standards (NSPS) and New Emission Standards for Hazardous Air Pollutants (NESHAPS) provisions of the statute.¹³³ To date such delegations are in effect for over one-half of the states.¹³⁴ The EPA has taken the position that, by virtue of delegation, a state can implement and enforce the

¹³⁰ See, e.g., 1977 SENATE REPORT, *supra* note 93, at 10 (noting that one of the fundamental concerns was to augment the responsibility, authority, and effectiveness of state and local air pollution control programs).

¹³¹ Clean Air Amendments, § 129, 42 U.S.C.A. §§ 7501-7508 (West Supp. 1978) (among other things, these provisions require that new sources planning to locate in such areas must achieve the “lowest achievable emission rate” and meet certain other conditions in order that there be net air quality benefit despite their operation).

¹³² See Letter from David Kee (U.S. Environmental Protection Agency, Region V) to author (Oct. 1, 1977).

¹³³ 42 U.S.C.A. § 7411(c)(1) (West Supp. 1978) (NSPS); *id.* § 7412(d)(1) (NESHAPS). NSPS have been promulgated for a large number of stationary sources which contribute significantly to air pollution. They are applicable only to new sources constructed or modified after the date of the proposal of the standards and are found at 40 C.F.R. pt. 60 (1977). NESHAPS are regulations applicable to new and existing sources of air pollutants which may cause or contribute to an increase in mortality or an increase in serious irreversible or incapacitating illness. They are found at 40 C.F.R. pt. 61 (1977). Various provisions of §§ 111 and 112 were substantially modified in 1977. See Clean Air Amendments, §§ 109, 110, 401(b), (c), *as amended by* Water Amendments, §§ 14(a)(7)-(9), 14(b)(1), 42 U.S.C.A. §§ 7411, 7412, 7414 (West Supp. 1978).

¹³⁴ See [1977] ENVIR. REP. (BNA) (Federal Regulations) 121:0402-0403, 121:0462.

federal standards though such regulations have not been adopted under the authority of state law.¹³⁵ Nevertheless, state attorneys general have usually insisted on the adoption of mirror-image regulations at the state level before delegation is accepted.¹³⁶ Therefore, delegation has in most cases amounted to no more than the EPA's expression of willingness to defer to state implementation and enforcement of regulations similar to the federal standards, as long as the state is, in the EPA's opinion, properly policing compliance.¹³⁷

The area of new source review has also been characterized by fragmentation and duplication of effort. Almost all states now have in effect new source review regulations designed to prevent the construction of new sources and modification of existing sources where their emissions will prevent the attainment or maintenance of the national ambient standards.¹³⁸ Yet the EPA continues to determine whether new sources comply with NSPS and NESHAPS in those states to which delegations have not been made, though the same state review procedures could be used for all purposes. If, where delegation has not occurred, the state has adopted emission limitations applicable to new sources which are as strict as or more stringent than NSPS and NESHAPS, and compliance with the state standards is monitored by the state's new source review process, the inefficiency is compounded since the EPA must still ensure compliance with the federal regulations.¹³⁹ Moreover, federal delegation has been limited in the case of some states to only certain of the

¹³⁵ See 1 OFFICE OF GENERAL COUNSEL, U.S. ENVIRONMENTAL PROTECTION AGENCY, A COLLECTION OF LEGAL OPINIONS 88-92 (1970-1973) [hereinafter cited as LEGAL OPINIONS]. This is similar to the position taken by the EPA with regard to other aspects of the law. See text accompanying notes 149-50 *infra*.

¹³⁶ Letter from David Kee (U.S. Environmental Protection Agency, Region V) to author (Oct. 1, 1977). In some states there has, however, been a "pure delegation" (no mirror-image regulations). Indiana is one such case. See 41 Fed. Reg. 43,237-38 (1976); Telephone interview with Mary Ann Muirhead (Assistant Regional Counsel, U.S. Environmental Protection Agency, Region V) (Nov. 29, 1977).

The various individual delegations are scattered throughout the Federal Register at the locations recorded in the source cited at note 134 *supra*.

¹³⁷ See, e.g., 41 Fed. Reg. 7,809-10 (1976) (Oregon).

¹³⁸ See [1977] 7 ENVIR. REP. (BNA) (Current Developments) 1291 (EPA has new source review authority in only six states). State review to determine whether construction of a new source or modification of an existing source will prevent attainment or maintenance of national standards is a required element of state implementation plans. 40 C.F.R. § 51.18(a) (1977).

¹³⁹ See also 1976 EPA PROGRESS REPORT, *supra* note 36, at 20 (noting fragmentation of new source reviews). In response to the survey of state air pollution control directors, discussed at note 235 *infra*, one of the complaints voiced was the duplication in new source reviews. E.g., letter from Douglas True (Environmental Program Supervisor, Iowa Department of Environmental Quality) to author (May 9, 1977).

source categories to which the federal standards apply,¹⁴⁰ and in all states it is inapplicable to standards promulgated or revised after the date of the respective delegations.¹⁴¹ This latter situation can be attributed in part to the statutory provision which requires that, before the EPA can make a delegation, the state must develop an adequate procedure for implementing and enforcing the applicable standards.¹⁴²

Along with the delegation has come considerable "red tape," that is, substantial reporting requirements designed to make certain that the states receiving delegation are in fact ensuring compliance with federal law.¹⁴³ Moreover, since the EPA retains authority to enforce and interpret the federal regulations regardless of delegation, sources can rely only with some trepidation upon a state's action pursuant to a delegation.¹⁴⁴ Yet to require advance concurrence from the EPA in each case would largely defeat some of the purposes to be served by delegation, that is, reducing duplication of effort and saving scarce federal resources for other tasks.

While vesting exclusive responsibility for enforcement of NSPS and NESHAPS in the states might eliminate some of these problems, the questionable willingness of some states to vigorously enforce the standards extinguishes the prospect that this option will or should soon be adopted.¹⁴⁵ Amending the statute to provide for automatic delegation immediately upon promulgation and revision of the standards might partially mitigate some of the inefficiencies detailed above. Success in that regard would depend on the willingness of state officials to act upon the EPA's construction of its delegation authority and the powers of a state to which a delegation runs. Regardless of any such delegation, the EPA must retain the authority to

¹⁴⁰ See, e.g., 40 Fed. Reg. 48,390-92 (1975) (New York).

¹⁴¹ See, e.g., 41 Fed. Reg. 19,759-60 (1976) (Massachusetts).

¹⁴² 42 U.S.C.A. §§ 7411(c)(1), 7412(d)(1) (West Supp. 1978).

¹⁴³ See, e.g., 41 Fed. Reg. 11,874-75 (1976) (Connecticut) (state must supply EPA with, among other things, the name and address of each facility subject to the standards, the operational status of each facility, and the compliance status of each facility, along with accompanying explanations of noncompliance, notice of enforcement actions brought, and the results of all reports relating to emission data).

¹⁴⁴ 42 U.S.C.A. § 7411(c)(2) (West Supp. 1978); *id.* § 7412(d)(2). See, e.g., 41 Fed. Reg. 11,874-75 (1976) (Connecticut) (noting that EPA retains the last word regarding interpretation of the federal standards). In *United States v. City of Paineville*, 431 F. Supp. 496, 501 n.9 (N.D. Ohio 1977), the court sustained the argument that EPA can enforce its interpretation of the federally promulgated regulations where the state adopts a different interpretation of similar provisions contained in state law.

¹⁴⁵ Cf. [1976-1977] 7 ENVIR. REP. (BNA) (Current Developments) 5, 1291 (noting that state action to prevent construction of sources where required has been inadequate).

enforce the standards.¹⁴⁶

In addition, the 1977 Amendments lay down certain new source review requirements relating to prevention of significant deterioration of air quality currently cleaner than the national standards¹⁴⁷ and to construction of new sources in areas not meeting the national ambient standards.¹⁴⁸ Whether these will add further to the present pattern of fragmentation of responsibility and duplication of effort remains to be seen.

Enforcement of Implementation Plans.—Where the EPA has promulgated an implementation plan for a state, it has taken the position that the federal statute empowers the state to take over implementation and enforcement of the related regulations regardless of whether similar regulations are in effect under the authority of state law.¹⁴⁹ Several courts appear to have concurred in this construction of the statute.¹⁵⁰ If there was any doubt that this was Congress's

¹⁴⁶ For an analysis of the EPA's policy on delegation in this area, some of the problems that have arisen, and possible future approaches, see [1977] 8 ENVIR. REP. (BNA) (Current Developments) 623-24. That discussion indicates that state and local governments want a greater role in regulation but will not accept additional delegations without more federal financial support.

¹⁴⁷ Clean Air Amendments, § 127(a), 42 U.S.C.A. §§ 7470-7479 (West Supp. 1978).

¹⁴⁸ *Id.* § 129(b), 42 U.S.C.A. §§ 7501-7508 (West Supp. 1978).

¹⁴⁹ 40 C.F.R. § 52.02(d) (1977). The EPA has not distinguished between the case where the state agency has authority under state law to adopt regulations similar to the federal regulations but chooses not to exercise that authority in implementing the federal plan, and the situation where there is no explicit authority under state law to devise and carry out a control strategy similar to the EPA plan. *See, e.g.*, 38 Fed. Reg. 30,633, 30,636 (1973) (noting that EPA promulgation of a transportation plan for certain areas in Texas could authorize the Texas Air Control Board to implement the federal inspection and maintenance program even though it lacked authority under state law to operate such a program).

¹⁵⁰ *Maryland v. EPA*, 530 F.2d 215 (4th Cir. 1975), *vacated on other grounds per curiam sub nom. EPA v. Brown*, 431 U.S. 99 (1977): "Nothing in the statute presently brought to our attention should prevent the EPA from, for example, promulgating substantive regulations and inviting Maryland to administer them upon proper 'assurances' by Maryland as required by the statute." *Id.* at 228. Did the court mean assurances that the state has the legal authority to carry out the plan? If so, must that authority have been exercised to set up a scheme similar to the federally promulgated controls? *See Natural Resources Defense Council, Inc. v. EPA*, 478 F.2d 875, 888 (1st Cir. 1973) (referring to "enforcement" only). Several commentators have argued that any attempted delegation of the EPA's powers to a state or local agency which does not possess authority under state law to take the actions to which the delegation applies would, in order to be effective, require express state legislative action stating that the agency receiving the delegation may accept and implement the federal power. *E.g.*, Simmons & Cutting, *A Many Layered Wonder: Nonvehicular Air Pollution Control Law in California*, 26 HASTINGS L.J. 109, 128-29 (1974). In addition to the above-cited cases, however, there are other decisions to support the general proposition that the federal government can endow state instrumentalities with power to act beyond their authority under state law. *Washington Dep't of Game v. FPC*, 207 F.2d 391, 396 (9th Cir. 1953), *cert. denied*, 347 U.S. 936 (1954) (FPC granted municipality a license to operate two dams with appurtenant power facilities on a navigable state river, allegedly in derogation of state law). *Cf. Gates v. Council of City of*

intention in 1970, the legislative history of the 1977 Amendments should lay the matter to rest in favor of the EPA's interpretation.¹⁵¹

State and local administration of a federal plan advances the congressional goal of air pollution abatement at the level of government closest to the problem. Nevertheless, the practical problems for an agency in administering such a control program could be significant in many cases. For example, pressured by strong local interests or simply out of dislike for the idea of an agency's acting beyond its state statutory authorization, the state legislature might reduce or entirely cut off funds for the agency's activities.¹⁵² The history of the implementation of the 1970 Amendments does not indicate any stampede of state agencies to administer federally imposed regulations.¹⁵³

Innovations Introduced by the 1977 Amendments.—In order to eliminate the advantages accruing to sources which successfully wage battles to delay efforts to bring them into compliance,¹⁵⁴ section 120 of the statute¹⁵⁵ now provides for imposition of a so-called "noncompliance penalty." This will be a charge imposed on each major source which does not comply with applicable emission limitations by July 1, 1979, or thirty days after the discovery of noncompliance, whichever is later. It is to be equivalent to the cleanup costs the source would have incurred had it chosen to install the necessary control equipment.¹⁵⁶ In language similar to that used in sections 111(c)(1), 112(d)(1), and 114(b)(1) of the Act,¹⁵⁷ the EPA is empow-

Huntington, 93 F. Supp. 757 (S.D.W. Va. 1950) (federal statute authorized city council to extend rent control). See also 2 C. ANTIEAU, MUNICIPAL CORPORATION LAW § 19A.08 (1973).

One basis, among others, for state enforcement of a federally promulgated plan is the citizen's suit provision, 42 U.S.C.A. § 7604 (West Supp. 1978). See Luneberg, *supra* note 9, at 662-67.

¹⁵¹ See, e.g., 1977 HOUSE REPORT, *supra* note 10, at 315-16.

¹⁵² See 1973 Oversight Hearings (II), *supra* note 80, at 956 (statement of Samuel Bleicher).

¹⁵³ Cf. J. HOROWITZ & S. KUHRTZ, *supra* note 39, at 31 (noting the lack of progress in implementation of the federally promulgated transportation control plans). States have also had doubts regarding whether they could administer a federal plan without authority in state law. See, e.g., CLEVELAND Note, *supra* note 26, at 387 (Ohio questions whether it has authority to enforce federal plan to control sulfur oxide pollution). Some states have, however, chosen to implement federally promulgated regulations. See, e.g., 40 C.F.R. § 52.324(b) (1977) (Colorado receives delegation to require sources to install and maintain monitoring equipment).

¹⁵⁴ 1977 HOUSE REPORT, *supra* note 10, at 72.

¹⁵⁵ Clean Air Amendments, § 118, 42 U.S.C.A. § 7420 (West Supp. 1978).

¹⁵⁶ *Id.*

¹⁵⁷ 42 U.S.C. §§ 1857c-6(c)(1), 1857c-7(d)(1), 1857c-9(b)(1) (1970) (current version at 42 U.S.C.A. §§ 7411(c)(1), 7412(d)(1), 7414(b)(1), respectively (West Supp. 1978)).

ered to delegate its authority to assess and collect these penalties.¹⁵⁸ The likelihood that state legislatures will not speedily enact the legislation necessary to endow their air agencies with power to assess such penalties significantly increases the importance of the way in which the EPA interprets its delegation authority under this provision. Without the aid of states in administering the noncompliance penalty scheme, the EPA will be hard-pressed to find the resources to make it effective by itself.¹⁵⁹ A construction of the statute to the effect that a state may administer this program under an EPA delegation without explicit authority under state law is, therefore, called for,¹⁶⁰ though the legislative history of the 1977 Amendments does not explicitly deal with this specific issue.¹⁶¹

Obligatory state assessment of permit fees may also lead to friction between the federal government and the states. Despite previous EPA studies indicating the aversion of state legislatures to the proposal,¹⁶² Congress mandated in 1977 that, where a permit is required under the statute, each major stationary source required to apply for the permit must pay to the issuing authority a fee sufficient to cover the costs of processing the application, as well as the costs of implementing and enforcing the terms of any permit issued.¹⁶³ If a state fails to act on its own to institute such a fee system, the EPA will have to promulgate permit fee provisions applicable to that state.¹⁶⁴ It is not at all clear that a state agency would accept money generated under such circumstances and, therefore, defray the costs of its control program as intended by Congress. Moreover, EPA promulgation may involve it more deeply in new source reviews, a prob-

¹⁵⁸ Clean Air Amendments, § 118, 42 U.S.C.A. § 7420(a)(1)(B)(i) (West Supp. 1978). Even where a state legislature has acted to endow the state air pollution control agency with authority comparable to § 120, the state must still receive a "delegation" under § 120 if it is to forestall EPA assessment of penalties. 42 U.S.C.A. § 7420(b) (West Supp. 1978).

¹⁵⁹ At least 3,500 major sources (that is, sources emitting at least 100 tons of air pollutants annually) were allegedly not complying with applicable regulations in 1977. 1977 SENATE REPORT, *supra* note 93, at 45. These are some of the sources to which the noncompliance penalty provisions apply. Clean Air Amendments, § 118, 42 U.S.C.A. § 7420(a)(2)(A)(i) (West Supp. 1978).

¹⁶⁰ For an EPA interpretation of language similar to that found in § 120 regarding delegation of authority, see text accompanying note 135 *supra*.

¹⁶¹ For a discussion of the type of political problems that might hinder a state agency in acting pursuant to federal delegation in this area, see text accompanying note 152 *supra*.

¹⁶² See *EPA's Strelow Raps With APCA Executive Committee*, 25 J. AIR POLL. CONT. A. 25, 27 (1975). See also [1974] 5 ENVIR. REP. (BNA) (Current Developments) 416.

¹⁶³ Clean Air Amendments, § 108(b), 42 U.S.C.A. § 7410(a)(2)(K) (West Supp. 1978).

¹⁶⁴ Since the permit fee provisions are required as part of an implementation plan, EPA promulgation is required. 42 U.S.C.A. § 7410(c)(1) (West Supp. 1978).

lem that hardly needs compounding.¹⁶⁵

In enacting this provision, Congress relied on the precedent set by statutes imposing fees for federal permits.¹⁶⁶ That the fees required by the 1977 Amendments relate to state permits was not seen as a difference of any great significance. In Congress's view, the provision was a valid exercise of the commerce power for the protection of states wishing to impose fees against competition for industry with states which do not want to collect fees.¹⁶⁷

Finally, as another example of the New Structuralism,¹⁶⁸ after August, 1978, state boards or bodies which approve permits or enforcement orders must have at least a majority of members who represent the public interest and do not derive a significant portion of their income from persons subject to the permits or enforcement orders.¹⁶⁹ If the affected states do not act to conform with this requirement, the EPA is apparently required to promulgate the necessary changes.¹⁷⁰ The possible constitutional infirmity of the EPA's restructuring state regulatory commissions would appear to be substantial in view of the Supreme Court's decision in *National League of Cities v. Usery*.¹⁷¹

State Flexibility

State flexibility in choosing the emission limitations and other controls necessary to attain and maintain the national ambient air quality standards was a touchstone of the 1970 Amendments. The states were not permitted to utilize intermittent controls or dispersion enhancement techniques as part of their control strategies except in certain limited circumstances.¹⁷² Otherwise, as long as a state

¹⁶⁵ See text accompanying notes 133-48 *supra* for a discussion of existing problems in the new source review area.

¹⁶⁶ 1977 HOUSE REPORT, *supra* note 10, at 217-19.

¹⁶⁷ *Id.* at 219.

¹⁶⁸ See text accompanying note 118 *supra*.

¹⁶⁹ Clean Air Amendments, § 125, 42 U.S.C.A. § 7428 (West Supp. 1978).

¹⁷⁰ By making the requirements respecting composition of state boards a mandated part of a state implementation plan, 42 U.S.C.A. § 7410(a)(2)(F) (West Supp. 1978), failure of a state to institute the required changes in agency composition appears to trigger federal promulgation pursuant to *id.* § 7410(c)(1).

¹⁷¹ 426 U.S. 833 (1976). See note 119 *supra*. The constitutional problems presented by this interpretation of the statute are so substantial that the courts will no doubt try to avoid adopting it.

¹⁷² See *Big Rivers Elec. Corp. v. EPA*, 523 F.2d 16 (6th Cir. 1975), *cert. denied*, 425 U.S. 934 (1976); *Kennecott Copper Corp. v. EPA*, 526 F.2d 1149 (9th Cir. 1975), *cert. denied*, 425 U.S. 935 (1976); *Natural Resources Defense Council, Inc. v. EPA*, 489 F.2d 390 (5th Cir. 1974), *rev'd on other grounds sub. nom. Train v. Natural Resources Defense Council, Inc.*, 421 U.S. 60 (1975). Such controls include employing tall stacks, which are intended to disperse pollutants

designed a plan or revisions sufficient to attain and maintain the standards within the congressionally mandated schedule, the EPA could not reject it.¹⁷³ Even if the EPA believed that the plan was so stringent as to be technologically or economically "infeasible," that is, necessitating the closing of sources because of the lack of available means for compliance, the EPA had no discretion to reject the plan if it was sufficient to attain the air quality goals.¹⁷⁴

While section 116 of the statute¹⁷⁵ allowed the states to adopt emission limitations more stringent than necessary to attain the federal standards, some concern was voiced regarding the lack of a mechanism to protect that state option.¹⁷⁶ The EPA considered more restrictive state controls to be part of the federally enforceable plan,¹⁷⁷ and the Supreme Court concurred in that interpretation.¹⁷⁸

high enough in the atmosphere that atmospheric dilution will prevent ambient air quality violations at ground level, and reducing emissions only when meteorological data indicate that violations of the ambient standards will occur. The decisions cited above held that controls of that type could be used only if it were demonstrated that emission-limitation regulations included in the state plan were sufficient, standing alone, to attain the ambient standards; or, if it were demonstrated that emission limitations sufficient to attain the standards were unachievable or infeasible and that the state had adopted regulations which would attain the maximum degree of emission limitation achievable. 489 F.2d at 410.

In 1977 Congress enacted a provision which, in most cases, prohibits the use of tall stacks and intermittent controls for reducing emissions and requires constant emission control to comply with state plans. Clean Air Amendments, § 121, 42 U.S.C.A. § 7423 (West Supp. 1978). There are exceptions, however. See *id.* § 117(b), 42 U.S.C.A. § 7419 (West Supp. 1978) (primary nonferrous smelters).

¹⁷³ *Train v. Natural Resources Defense Council, Inc.*, 421 U.S. 60 (1975). The House Committee on Interstate and Foreign Commerce approved this interpretation in 1977. 1977 HOUSE REPORT, *supra* note 10, at 57.

For a decision holding that a state's own determination that its plan meets the requirements of the statute is not binding on the EPA, see *Kennecott Copper Corp. v. Costle*, 572 F.2d 1349 (9th Cir. 1978), *reversing* 424 F. Supp. 1217 (D. Nev. 1976); *Bunker Hill Co. v. EPA*, 572 F.2d 1286, 1293-94 (9th Cir. 1977) (*per curiam*).

¹⁷⁴ *Union Elec. Co. v. EPA*, 427 U.S. 246 (1976). The result in that case was approved in 1977 HOUSE REPORT, *supra* note 10, at 56.

¹⁷⁵ 42 U.S.C.A. § 7416 (West Supp. 1978).

¹⁷⁶ See, e.g., 1977 HOUSE REPORT, *supra* note 10, at 133-37; Stern, *Strengthening the Clean Air Act*, 23 J. AIR POLL. CONT. A. 1019, 1020-21 (1973).

The testimony of state officials during oversight hearings on the Clean Air Act demonstrated continuing strong support for allowing states to regulate more stringently than the federal government. See, e.g., *Implementation of the Clean Air Act—1975 (Part II), Hearings Before the Subcomm. on Environmental Pollution of the Senate Comm. on Public Works*, 94th Cong., 1st Sess. 1586-87 (1975) [hereinafter cited as *Clean Air Act Hearings (II)*]; *Clean Air Act Oversight (Part I), Hearings Before the Subcomm. on Environmental Pollution of the Senate Comm. on Public Works*, 93d Cong., 2d Sess. 310-11 (1974) [hereinafter cited as *1974 Oversight Hearings (I)*].

¹⁷⁷ 37 Fed. Reg. 10,842, 10,846 (1972) (unless the regulations were separate from those necessary for attainment and maintenance of the national standards).

¹⁷⁸ *Union Elec. Co. v. EPA*, 427 U.S. 246, 264 (1976). But see *Currie, supra* note 12, at 399

However, adoption of more stringent regulations by states otherwise so inclined was by no means assured. State issuance of standards substantially the same as those promulgated by the EPA, as well as emission regulations no more restrictive than necessary to attain the federally mandated ambient air quality levels, has, therefore, been the norm.¹⁷⁹ Difficulty in establishing the need to attain a level of air quality cleaner than the federal standards,¹⁸⁰ which are allegedly designed to protect both public health and welfare, and interstate competition for industry¹⁸¹ no doubt contributed to this result. Moreover, migration of pollutants across state borders can hinder or deter neighboring states from attempting to enact or enforce more stringent controls.¹⁸²

In adopting the 1977 Amendments section 127 requirements for preventing significant deterioration of air resources currently cleaner than the national ambient standards,¹⁸³ Congress attempted to guarantee each state the right to maintain air quality superior to the federal minimum, thereby allegedly furthering the purposes of section 116.¹⁸⁴ This goal is to be implemented by means of permit systems

(arguing that it is unsound for the federal government to enforce regulations it never determined were desirable).

¹⁷⁹ Telephone interview with John Chicca (U.S. Environmental Protection Agency, Region V) (Jan. 16, 1978); *1970 Amendments Hearings (I)*, *supra* note 79, at 169-70, 211, 214-15, 356-57, 405, 430-31. See Note, *Clean Air Act Amendments of 1970: A Congressional Cosmetic*, 61 GEO. L.J. 153 (1972) (predicting that national standards would become the norm). The states' emission regulations and ambient standards are collected in ENVIR. REP. (BNA) (State Air Laws).

Some state regulations have, however, been more stringent than required. See, e.g., [1972] 1 ENVIR. REP. (BNA) (State Air Laws) 356:0541-:0542 (Hawaii's ambient standards). See also 1977 HOUSE REPORT, *supra* note 10, at 191; *Clean Air Act Hearings, (I) & (II)*, *supra* notes 80 & 179, at 783, 1637, 1641.

¹⁸⁰ See, e.g., *1970 Amendments Hearings (I)*, *supra* note 79, at 211. Compare *Public Serv. Co. of N.M. v. Environmental Improvement Bd.*, 89 N.M. 223, 229, 549 P.2d 638, 644 (1976) (sulfur dioxide regulations held not authorized in part because they were not necessary to attain ambient standards) with *Associated Indus. of Mass. v. Frechette*, 3 ENVIR. REP. (BNA) (Decisions) 1629 (Mass. Super. Ct. 1972) (rulemaking power not limited to attainment of ambient standards).

¹⁸¹ See, e.g., 1977 HOUSE REPORT, *supra* note 10, at 136-37; *Nondegradation Policy of the Clean Air Act: Hearing Before the Subcomm. on Air and Water Pollution of the Senate Comm. on Public Works*, 93d Cong., 1st Sess. 6 (1973) [hereinafter cited as *Nondegradation Policy Hearings*]; *Clean Air Act Hearings (I)*, *supra* note 80, at 859.

¹⁸² See, e.g., authorities cited in note 181 *supra*.

¹⁸³ *Clean Air Amendments*, § 127, 42 U.S.C.A. §§ 7470-7479 (West Supp. 1978).

¹⁸⁴ 1977 HOUSE REPORT, *supra* note 10, at 136-37. The congressional scheme does not, however, eliminate the areas where interstate competition for industry can operate to the detriment of air quality. For example, such pressures will, no doubt, be a factor in state decisions to reclassify areas. For a discussion of reclassification, see the text accompanying notes 187-92 *infra*. Nor do these provisions protect the states' right to require reductions in pollution to

adopted by the states or promulgated by the EPA. Such a permit system must prevent the construction of new major stationary sources in areas of the state where the air quality is better than the national secondary standards, if the sources' emissions will interfere either with the maximum allowable air quality deterioration increments¹⁸⁵ which are applicable to the areas where the sources are to be located or with those increments applicable to other "clean" areas.¹⁸⁶ Such increments are designed so as to keep the pollution level below that mandated by the standards.

While the nondeterioration requirements created additional regulatory options, at the same time they have limited the discretion of states which do not wish to exercise the "right" to regulate more stringently than the federal minimum ambient air standards. Nevertheless, some flexibility is preserved for the states by allowing them to "reclassify" areas, other than certain federal lands whose air quality is better than the national standards.¹⁸⁷ The permissible amount of additional pollution allowed for such an area depends on whether it has been categorized as Class I, II, or III. Each classification has a different statutorily defined increment of maximum allowable air quality deterioration.¹⁸⁸ A state must prepare a "satisfactory description and analysis of the health, environmental, economic, social and energy effects" of a proposed reclassification.¹⁸⁹ It is up to the state and affected local governments alone, however, to determine the weight each of these factors should be given in deciding whether to reclassify a region.¹⁹⁰ The reclassification may not cause or contrib-

levels below that mandated by the national ambient standards where pollution concentrations currently exceed the national standards.

¹⁸⁵ See note 128 *supra*.

¹⁸⁶ 42 U.S.C.A. § 7475(a)(3) (West Supp. 1978). Sources covered by the permit requirements are specified. *Id.* § 7479(1). Regardless of the new source's impact on air quality, it must install the "best available control technology" for each pollutant which it will emit which is regulated under the Act. *Id.* § 7475(a)(4). This provision attempts to ensure that one source will not use up all the allowable deterioration increment in the state where it will be located or other states.

Initially, only sulfur oxides and particulate matter are covered by the nondeterioration scheme. The EPA has been directed, however, to develop regulations to prevent significant deterioration of air quality which would result from the emissions of carbon monoxide, hydrocarbons, nitrogen oxides, and photochemical oxidants. *Id.* § 7476.

¹⁸⁷ *Id.* § 7474. Certain federal areas (such as international parks) are Class I and may not be redesignated. *Id.* § 7472. Other federal lands may be redesignated only as Class I or Class II. *Id.* § 7474(a).

¹⁸⁸ *Id.* § 7473. The least deterioration is permitted in Class I areas, and the most is allowed in Class III regions.

¹⁸⁹ *Id.* § 7474(b)(1)(A).

¹⁹⁰ 1977 HOUSE REPORT, *supra* note 10, at 143, 147, 150.

ute to emissions exceeding applicable deterioration increments in any other area or a violation of the national ambient air quality standards.¹⁹¹ The EPA may disapprove a reclassification only if it does not meet the "procedural" requirements of the statute.¹⁹²

State flexibility has been increased in other respects by the 1977 Amendments. States with severe problems caused by motor vehicle pollution may now choose to apply new motor vehicle emission standards adopted by California, in lieu of the federal standards, to vehicles sold in those jurisdictions.¹⁹³ The California requirements must be at least as protective of the public health and welfare as those set by the EPA.¹⁹⁴ The California standards may, and probably will be, more stringent.¹⁹⁵ Also, despite doubts expressed by some legislators regarding the advisability of the provision,¹⁹⁶ states now have the opportunity, though limited in certain respects, to establish emission standards applicable to radioactive air pollutants.¹⁹⁷

¹⁹¹ 42 U.S.C.A. § 7474(b)(2)(B) (West Supp. 1978).

¹⁹² *Id.* § 7474(b)(2).

The regulations which the EPA had adopted prior to 1977 establishing a nondeterioration scheme authorized the Agency to veto a state's reclassification on the ground that the state had improperly weighed the factors relating to the desirability of reclassification. *See* 40 C.F.R. § 52.21(c)(3)(vi)(a) (1976).

Another area of state concern regarding the nondegradation issue had been the authority which the EPA's regulations gave to federal officials in charge of federally owned land to prevent state reclassification and, on their own, to reclassify territory under their control. *See* 40 C.F.R. § 52.21(c)(3)(iv) (1977); 1977 HOUSE REPORT, *supra* note 10, at 8, 140-41, 143, 149. The 1977 Amendments reduce the so-called "federal land manager's" role such that the manager may merely comment upon proposed state reclassifications, 42 U.S.C.A. § 7474(b)(1)(B) (West Supp. 1978), but allow him to veto permits for new sources in certain instances. *Id.* § 7475(d)(2)(B), (C).

Finally, where there is a dispute between an Indian tribe and a state regarding a proposed reclassification or between states regarding the effect of the issuance of a particular permit on air quality, the EPA may, at the request of the parties to the dispute, resolve the controversy. *Id.* § 7474(e).

¹⁹³ Clean Air Amendments, § 129(b), 42 U.S.C.A. § 7507 (West Supp. 1978). Previously only California had been able to regulate more stringently than the federal government in the area of new automobile emissions. *See* 42 U.S.C. § 1857f-6a(b) (1970); 42 U.S.C.A. § 7543(b) (West Supp. 1978).

¹⁹⁴ 42 U.S.C.A. § 7507 (West Supp. 1978).

¹⁹⁵ [1977] 8 ENVIR. REP. (BNA) (Current Developments) 904 (California proposes 1979 model year standards of .41 grams per mile (hydrocarbons), 9.0 grams per mile (carbon monoxide), and 1.5 grams per mile (nitrogen oxides) compared to federal standards for that year of 1.5 grams per mile, 15 grams per mile, and 2 grams per mile, respectively, for those pollutants).

¹⁹⁶ *See* 123 CONG. REC. S13,710 (daily ed. Aug. 4, 1977) (remarks of Sen. Johnston); *id.* H8,672 (daily ed. Aug. 4, 1977) (remarks of Rep. Moss).

¹⁹⁷ Clean Air Amendments, § 120(a), 42 U.S.C.A. § 7422 (West Supp. 1978). The opportunity is "limited" because the Nuclear Regulatory Commission may veto the application of any such state standards to a facility under its jurisdiction if it determines that the regulation would endanger public health or safety and the President does not find to the contrary.

Furthermore, the 1977 Amendments provide for state-granted variances and other extensions of compliance dates in certain cases of fuel shortage or other types of economic disruption, though federal supervision of their issuance is substantial.¹⁹⁸ Finally, state concurrence is now required as a condition for an EPA decision to permit coal-burning, in violation of the state's implementation plan, by a fuel-burning source prohibited from burning petroleum products or natural gas by the Department of Energy.¹⁹⁹ Yet the EPA can compel a state to revise its plan where supplies of certain types of fuel do not appear sufficiently available to permit long-term compliance with emission limitations.²⁰⁰

Despite these changes and the expressed intentions of Congress,²⁰¹ the overall effect of the 1977 Amendments would appear to be to limit state flexibility considerably. One need only glance at the intricate detail by which the statute regulates various aspects of control programs—such as issuance of enforcement orders whose final compliance dates extend beyond the dates for attainment of the ambient standards,²⁰² imposition of noncompliance penalties,²⁰³ and requirements for plans in nonattainment areas²⁰⁴—to conclude that this is the case.

Interstate Pollution

The fact that air pollution does not confine itself to the state in which it is produced is one of the principal justifications for federal regulation of this environmental hazard.²⁰⁵ Ironically, efforts to de-

¹⁹⁸ Clean Air Amendments, §§ 107, 122, 42 U.S.C.A. §§ 7410, 7425 (West Supp. 1978).

¹⁹⁹ *Id.* § 112(b)(1) (repealing 42 U.S.C. § 1875c-10 (1970)). Such prohibition orders are issued pursuant to the Energy Supply and Coordination Act of 1974, 15 U.S.C. §§ 791-798 (1976). Prior to the 1977 Amendments, their issuance with EPA's concurrence alone could result in violation of a state's emission regulations, though not the primary ambient standards. *See* 42 U.S.C. § 1857c-10(c) (Supp. V 1975) (repealed 1977). The Department of Energy succeeded to the authority of the former Federal Energy Administration. Department of Energy Organization Act, 42 U.S.C.A. §§ 7101-7352 (West Supp. 1978).

²⁰⁰ Clean Air Amendments, § 122, 42 U.S.C.A. § 7424 (West Supp. 1978).

Also of importance from the point of view of state flexibility is the provision for redrawing the boundaries of air quality control regions. *Id.* § 103, 42 U.S.C.A. § 7407(e)(1) (West Supp. 1978). The boundaries of these regions are important for various regulatory purposes, including, for example, determining the areas where revised and more stringent implementation plans will be applicable. *See id.* § 129(b), 42 U.S.C.A. §§ 7501(2), 7502 (West Supp. 1978); *id.* § 129(c), 42 U.S.C.A. § 7502 note (West Supp. 1978).

²⁰¹ *See* 1977 SENATE REPORT, *supra* note 93, at 10.

²⁰² Clean Air Amendments, § 112(a), 42 U.S.C.A. § 7413 (West Supp. 1978).

²⁰³ *Id.* § 118, 42 U.S.C.A. § 7420 (West Supp. 1978).

²⁰⁴ *Id.* § 129, 42 U.S.C.A. §§ 7501-7508 (West Supp. 1978).

²⁰⁵ *See* South Terminal Corp. v. EPA, 504 F.2d 646, 677 (1st Cir. 1974); United States v.

wise an adequate legal mechanism to protect one state from the pollution migrating from another have not proved successful thus far.

Having abandoned the "conference" approach to the problem²⁰⁶ in view of its dismal record of nonperformance,²⁰⁷ Congress in 1970 required that each state implementation plan contain provisions to ensure that emissions from sources in one state would not interfere with the attainment or maintenance of the national standards in another state.²⁰⁸ In reviewing the experience under the statute, Congress concluded in 1977 that the EPA had not effectively implemented this mandate because it failed to require that specific measures be included in implementation plans to assure that effective enforcement measures could and would be brought to abate pollution migrating from one state to another.²⁰⁹ Each state implementation plan is now required, therefore, to explicitly prohibit stationary sources in the state from emitting any air pollutant in amounts which will prevent the attainment or maintenance of the national air quality standards or interfere with the prevention of significant deterioration of currently clean air in any other state.²¹⁰

Section 126²¹¹ provides the means to implement such a general prohibition in the case of major stationary sources, that is, those emitting or capable of emitting annually 100 or more tons of pollutants.²¹² Any state or political subdivision may petition the EPA for a finding that such a facility, whether existing or proposed to be built, emits or would emit pollutants in violation of the general prohibition against interstate pollution. Where the EPA makes a find-

Bishop Processing Co., 287 F. Supp. 624, 629 (D. Md. 1968), *aff'd on other grounds*, 423 F.2d 469 (4th Cir.), *cert. denied*, 398 U.S. 904 (1970). See also Edelman, *Federal Air and Water Control: The Application of the Commerce Power to Abate Interstate and Intrastate Pollution*, 33 GEO. WASH. L. REV. 1067, 1078-87 (1965).

²⁰⁶ This basically consisted of a series of meetings held among the federal government, affected states, and pollution sources in order to see if some type of abatement plan could be agreed upon, though judicial relief was available in some instances. Vestiges of this approach were, until 1977, contained at 42 U.S.C. § 1857d (1970) (though relating only to pollutants for which national ambient standards had not been set). Even these were eliminated by the 1977 Amendments. See Clean Air Amendments, § 114, 42 U.S.C.A. § 7415 (West Supp. 1978).

²⁰⁷ See, e.g., Comment, *Air Pollution in the Marietta-Parkersburg Area—A Case History*, 32 OHIO ST. L.J. 58 (1971).

²⁰⁸ 42 U.S.C. § 1857c-5(a)(2)(E) (1970) (current version at 42 U.S.C.A. § 7410(a)(2)(E) (West Supp. 1978)).

²⁰⁹ 1977 SENATE REPORT, *supra* note 93, at 41-42; 1977 HOUSE REPORT, *supra* note 10, at 329-30.

²¹⁰ Clean Air Amendments, § 108(a)(4), 42 U.S.C.A. § 7410(a)(2)(E) (West Supp. 1978). See also 1977 CONFERENCE REPORT, *supra* note 101, at 146 (House concurred in Senate provision requiring such a prohibition be contained in each implementation plan).

²¹¹ 42 U.S.C.A. § 7426 (West Supp. 1978).

²¹² *Id.* § 7602(j).

ing to that effect, it is a violation of the implementation plan of the state where the source is located or is proposed for construction if the facility operates thereafter in violation of the prohibition. That violation may be abated by the EPA pursuant to section 113²¹³ and, perhaps, by a citizen's suit pursuant to section 304.²¹⁴ The EPA is authorized to establish compliance schedules for existing sources of up to three years duration in order to eliminate the interstate pollution.²¹⁵

Unfortunately, the problems with section 126 are substantial. Since it applies only to major sources, it does not provide a means for dealing with smaller sources which, alone or in combination with others, could create significant interstate pollution.²¹⁶ While Congress clearly appears to have intended that transboundary pollution not interfere with the attainment of state standards more stringent than their federal counterparts,²¹⁷ the statute as amended does not appear to carry out that purpose. Instead, the provisions of the 1977 Amendments dealing with interstate pollution refer only to protection of the "national" standards.²¹⁸ Nor does section 126 deal with automobile-related pollutants,²¹⁹ which are just as likely to migrate as sulfur oxides and particulate matter.²²⁰

²¹³ *Id.* § 7413. Federal enforcement attaches to violations of "applicable implementation plans." *Id.* See also 1977 SENATE REPORT, *supra* note 93, at 42.

²¹⁴ 42 U.S.C.A. § 7604 (West Supp. 1978). Citizen enforcement is available for EPA orders and emission standards and limitations which are in effect under the Act. Violation of the general prohibitions against interstate pollution that are required as part of implementation plans arguably constitutes a violation of emission standards or limitations within the meaning of this provision. *Id.* § 7604(f).

The state receiving the migrating pollution could avail itself of § 304(f), 42 U.S.C.A. § 7604(f) (West Supp. 1978). See note 9 *supra*.

²¹⁵ Clean Air Amendments, § 123, 42 U.S.C.A. § 7426 (West Supp. 1978).

²¹⁶ Since plans are now required to contain general prohibitions against interstate pollution, *see* text accompanying notes 210-15 *supra*, suits pursuant to § 304 might also be available to remedy interstate pollution caused by minor sources. See note 214 *supra*. The same argument could support EPA enforcement against such sources. See note 213 *supra*.

²¹⁷ See 1977 SENATE REPORT, *supra* note 93, at 42; 1977 HOUSE REPORT, *supra* note 10, at 331 n.14.

²¹⁸ Clean Air Amendments, §§ 108(a)(4), 126, 42 U.S.C.A. §§ 7410(a)(2)(E), 7426 (West Supp. 1978) (§ 123 refers back to § 108(a)(4), which refers only to protection of the "national standards").

²¹⁹ 42 U.S.C.A. § 7426(b) (West Supp. 1978) applies to "any major source" emitting a pollutant in violation of § 110(a)(2)(E), 42 U.S.C.A. § 7410(a)(2)(E) (West Supp. 1978). The latter provision deals only with major "stationary sources."

²²⁰ See, e.g., [1975] 6 ENVIR. REP. (BNA) (Current Developments) 659 (New Jersey Department of Environmental Protection notes that hydrocarbon emissions drift from area to area).

Actual implementation of section 126 may prove troublesome. Tracing the effect of the emissions from a particular source or sources in one state on the attainment of standards in another state with the degree of certainty that can withstand judicial scrutiny²²¹ could be difficult.²²² A source might, moreover, attempt to argue that it is not its migrating emissions that cause a violation of the federal standards in the adjacent state, but rather that the receptor state has not sufficiently controlled its own sources, and that, if it had done so, there would be no such violation. This argument draws some support from several provisions of the statute which, literally construed, indicate that each state must design a plan sufficient to attain the standards within its territorial jurisdiction regardless of where the emissions originate.²²³ Of course, if accepted, that contention would render section 126 ineffective with respect to existing sources in most cases. Congress could hardly have intended such a result. Furthermore, its use of the term "prevention"²²⁴ seems clearly to contemplate the situation where the receptor state has adopted emission controls which are sufficient to attain the federal standards within its own borders in the absence of pollutants originating from out of state.

While the source whose emissions migrate across state borders should not, therefore, succeed with its argument as posed above, that argument does touch on one of the most significant shortcomings of section 126. The scheme throws the entire burden of control of an interstate problem on the originating source.²²⁵ Yet equity and eco-

²²¹ Actions of the EPA under § 126, 42 U.S.C.A. § 7426 (West Supp. 1978), may be appealed via § 307(b)(1) to the United States courts of appeals. See Clean Air Amendments, § 305(c)(2), 42 U.S.C.A. § 7607(b)(1) (West Supp. 1978), which provides for review of "final actions" which are locally or regionally applicable. But there is no indication whether a finding under § 126 is a "final action" for the purposes of this provision prior to the time an enforcement action is brought against the affected source. The reviewing court may reverse such EPA action if it is found to be "arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law." *Id.* § 305(a), 42 U.S.C.A. § 7607(d)(1)(M), (9)(A) (West Supp. 1978).

²²² *Cf. Citizens Ass'n of Georgetown v. Washington*, 383 F. Supp. 134, 141-42 (D.D.C. 1974), *rev'd on other grounds*, 535 F.2d 1318 (D.C.Cir. 1976) (unsuccessful attempt to enjoin construction of buildings in part on the ground of ambient standards violation); O'Fallon, *supra* note 2, at 283 (noting the difficulty of enforcing ambient standards).

²²³ 42 U.S.C.A. § 7407 (West Supp. 1978) ("Each State shall have the primary responsibility for assuring air quality within the entire geographic area comprising such State by submitting an implementation plan . . . which will specify the manner in which . . . standards will be achieved . . . within each air quality control region in such State."); *id.* § 7410(a)(1) ("Each State shall . . . adopt . . . a plan which provides for implementation . . . of such primary standard in each air quality control region (or portion thereof) within such State.").

²²⁴ Clean Air Amendments, § 108(a)(4), 42 U.S.C.A. § 7410(a)(2)(E) (West Supp. 1978).

²²⁵ *Id.* § 123, 42 U.S.C.A. § 7406(a)(1)(B) (West Supp. 1978). It is the source whose pollu-

nomics might suggest in some, and perhaps most, cases that it would be more appropriate to allocate the necessary emission reductions among sources in both emitter and receptor states. Admittedly, there is a lack of easily identifiable, specific criteria to guide such an allocation. That is no excuse, however, for not permitting the flexibility to go beyond the borders of the emitter state when devising controls to eliminate interstate pollution.

Even putting the above problems aside, section 126 may already be outmoded as a means for dealing effectively with interstate pollution. Recent scientific evidence indicates that emission plumes are transported far from their sources and in fact may increase in pollutant concentration during the transport process.²²⁶ In short, the problem of migrating pollutants may be far more pervasive than was once thought to be the case. Yet the time-consuming procedures of section 126, along with its case-by-case approach, are hardly suitable for dealing with the numerous and complex instances of interstate pollution that may exist now or could arise in the future. Such emissions must be dealt with at the initial implementation plan formulation stage. At that time, specific emission limitations should be imposed on facilities to deal with transboundary pollution.²²⁷ The statute, as presently drafted, can be construed to require this type of approach.²²⁸ It is not clear, however, that one state will voluntarily impose regulations on sources located within its territory for the benefit of neighboring states.²²⁹ The EPA would have to fill any breach

tants cross the border which is considered to be operating in violation of an applicable implementation plan and, therefore, subject to enforcement action.

²²⁶ See, e.g., 1977 SENATE REPORT, *supra* note 93, at 24; 1977 HOUSE REPORT, *supra* note 10, at 85, 135; [1977] 8 ENVIR. REP. (BNA) (Current Developments) 589; [1976] 7 *id.* 386 (long-range transport of sulfates and ozone noted).

²²⁷ In fact the EPA appears to have adopted this type of approach even under the 1970 statute. Telephone interview with John Chicca (U.S. Environmental Protection Agency, Region V) (Nov. 29, 1977). See also 40 C.F.R. § 51.10(d) (1977) (plans for each air quality control region must have adequate provisions to insure that pollutant emissions within such region will not interfere with attainment and maintenance of any national standard in any portion of an interstate region or in any other region). However, in 1977 Congress did not see fit to acknowledge this, but left the impression that the EPA had not employed regulatory controls to deal with the interstate pollution problem. See 1977 HOUSE REPORT, *supra* note 10, at 329.

²²⁸ See 42 U.S.C.A. § 7410(a)(2)(E) (West Supp. 1978), which requires plans to contain adequate provisions prohibiting sources in the state from causing interstate pollution. The EPA appears to be currently implementing this approach to plan formulation. See [1977] 8 ENVIR. REP. (BNA) (Current Developments) 851 (fact that ozone is transported will be recognized in developing policies relating to implementation plans).

²²⁹ Cf. *Controls Hearings (III)*, *supra* note 39, at 667, 685, 707 (which details the problems encountered in designing a transportation control plan for the Washington, D.C., area in 1973, including the difficulties in obtaining interstate cooperation).

by formulating controls.²³⁰ As discussed in relation to section 126,²³¹ to ensure that emission reductions are equitably distributed among the states involved and to avoid inefficient emission allocation, the EPA should not be forced in such cases to focus its attention solely on the state where the sources are located. The EPA should be able to impose controls on both the emitter and receptor states if appropriate. Yet the statute may not authorize the EPA to promulgate regulations for other than emitter states.²³²

In view of the apparent extent of interstate pollution, perhaps vesting exclusive jurisdiction in the EPA to design implementation plans may be the most effective way to design an allocation of emission reductions which is efficient and equitable on a nationwide scale.²³³ This is not, however, clearly the case at the present time.²³⁴

Administrative Problems

Much of the intergovernmental friction which arose in connection with implementation of the 1970 Amendments can be attributed more to administrative practice than to structural defects in the statutory scheme. A survey of air pollution control directors conducted by this writer during the spring of 1977 supports this conclusion.²³⁵ One of the most common complaints voiced by the states has been the unclear guidance provided by the EPA.²³⁶ There are many examples: the failure of the EPA to publish regulations defining the parameters for an approvable implementation plan early in the plan

²³⁰ 42 U.S.C.A. § 7410(c) (West Supp. 1978).

²³¹ See text accompanying note 225 *supra*.

²³² See 42 U.S.C.A. § 7410(a)(2)(E) (West Supp. 1978). That the state where the emissions originate must "prevent" interference with ambient air quality standards in other states implies that the burden of control is to fall on the emitter state.

²³³ For example, assume that the emissions from one state have an impact on the air quality of half a dozen or more other states. In order to design its plan, the emitter state's air pollution control agency would have to coordinate its work with the staff of agencies from all the other affected states. The bureaucratic tangle could be considerable in that case, a situation not necessarily duplicated where one agency (EPA) is responsible for plan development.

²³⁴ For a discussion of the possible diseconomies involved in federal plan formulation, see text accompanying notes 38-44 *supra*.

²³⁵ Letters were sent to the air pollution control director in each state and in the District of Columbia. The questionnaire inquired essentially whether the Clean Air Act Amendments of 1970 had proved to be an "effective and efficient" institutional framework for dealing with air pollution. Forty responses were received and are in the possession of the author. Some of the respondents requested that their answers be held confidential.

²³⁶ See, e.g., Rihm, *A State Government Viewpoint, How Do We Really Stand With the Clean Air Act?*, 23 J. AIR POLL. CONT. A. 837, 838-39 (1973). At least three of the respondents to the survey, discussed in note 235 *supra*, complained of this problem in one form or another (e.g., changing rules, impossibility to obtain the necessary decisions from the EPA).

preparation process;²³⁷ substantial changes in those regulations between their initial proposal and their final promulgation;²³⁸ vacillation regarding what degree of emission control could be expected from certain source categories;²³⁹ promulgation and then indefinite suspension of the federal indirect source regulations;²⁴⁰ proposal of the "example region" approach for designing sulfur dioxide control strategies;²⁴¹ then urging the states to change regulations partly because that approach resulted in overly stringent control of sources;²⁴² and finally, the EPA's second thoughts regarding the desirability of sulfur dioxide control relaxation in the form pursued by the Agency.²⁴³

At times, of course, the EPA's change of direction was the result

²³⁷ While guidelines were proposed in April 15, 1971, 36 Fed. Reg. 8,186 (1971), the final regulations were not issued until August, 1971, 39 Fed. Reg. 486 (1971), though the plans were due to be submitted to the EPA the following January. This delay was the subject of extensive criticism during the 1972 Senate oversight hearings. See *1970 Amendments Hearings (I)*, *supra* note 79, at 4, 12.

²³⁸ An examination and critique of these changes is contained in the statement of Richard E. Ayres, representing the Natural Resources Defense Council, Inc., *1970 Amendments Hearings (I)*, *supra* note 79, at 25-47.

²³⁹ One of the most celebrated was the apparent waffling by the EPA regarding whether 90% sulfur removal was technologically and economically feasible for existing copper smelters. See *id.* at 131.

²⁴⁰ See 39 Fed. Reg. 7,269 (1974) (approval and promulgation of implementation plans); 39 Fed. Reg. 45,014 (1974) and 40 Fed. Reg. 28,064 (1975) (suspension). By the end of 1975, 17 states and territories had submitted plans to the EPA for regulating indirect sources; 11 of these had been approved by the EPA. See PROGRESS IN THE PREVENTION AND CONTROL OF AIR POLLUTION IN 1975: ANNUAL REPORT OF THE ADMINISTRATOR OF THE ENVIRONMENTAL PROTECTION AGENCY TO THE CONGRESS, S. DOC. NO. 228, 94th Cong., 2d Sess. 21 (1976) [hereinafter cited as SENATE PROGRESS REPORT]. Following the federal suspension, Connecticut, for example, felt compelled to suspend its own indirect source control program, except with respect to highways and airports, in view of the fact that other states were not implementing such controls and it, therefore, found itself in a difficult competitive position. [1977] 8 ENVIR. REP. (BNA) (Current Developments) 427.

²⁴¹ 40 C.F.R. § 51.13(d) (1977). The EPA indicated that, as long as a control strategy was sufficient to attain and maintain the ambient standards in one region in a state ("example region"), the Agency would approve the same strategy, that is, the same degree of control for other regions in the same state where the air quality was better than in the example region.

²⁴² In 1973 the EPA adopted what it called a "clean fuels policy" because of the insufficient supplies of gas, low-sulfur oil, and low-sulfur coal which could satisfy all the state sulfur dioxide regulations. [1973] 3 ENVIR. REP. (BNA) (Current Developments) 1459. The policy sought to encourage states which had imposed controls more stringent than necessary to attain the national primary standards for sulfur dioxide to relax those controls, making scarce low-sulfur fuels available for use in those states where they were needed for primary standard attainment. *Id.*

Studies conducted by the EPA pursuant to the Energy Supply and Coordination Act of 1974, 15 U.S.C. §§ 791-798 (1976), showed that the example-region approach was one of the factors which created the clean fuels deficit. EPA PLAN REVIEW, *supra* note 42, at 3.

²⁴³ See [1977] 8 ENVIR. REP. (BNA) (Current Developments) 590; [1976] 7 *id.* at 295-98.

of court decisions,²⁴⁴ pressures from the Office of Management and Budget (OMB),²⁴⁵ or pressures from Congress.²⁴⁶ In other cases, new scientific evidence caused the reversal.²⁴⁷ All of which is not to say that internal EPA misjudgments did not occur.²⁴⁸ Regardless of the reasons for the changes in position, from the viewpoint of the perplexed state administrator attempting to build a stable program the effect was the same.²⁴⁹ In at least one case EPA vacillation may have resulted in its later having to promulgate regulations for a state which refused to act, even though without the change in position the state might have set up the regulatory framework on its own.²⁵⁰

When the EPA did take a position on an issue, in many cases its inflexibility became a source of frustration for state and local agencies.²⁵¹ EPA regulations lay down detailed requirements for state

²⁴⁴ *E.g.*, *Natural Resources Defense Council, Inc. v. EPA*, 475 F.2d 968 (D.C. Cir. 1973) (the EPA ordered to rescind its extension of the date for state submittal of transportation control plans and its previous extension of the time required for implementation of those controls).

²⁴⁵ The changes in the implementation plan guidelines, *see* text accompanying note 238 *supra*, were allegedly the result of OMB pressure. *See 1970 Amendments Hearings (I)*, *supra* note 79, *passim*. For some confirmation of the accuracy of these charges from former EPA officials, *see* J. QUARLES, *supra* note 39, at 88; R. SANSOM, *supra* note 39, at 30-31.

²⁴⁶ According to former EPA Administrator William Ruckelshaus, some of the changes in the implementation-plan guidelines, in particular the format for the sample air pollution regulations, were suggested by Senators Muskie and Cooper. *1970 Amendments Hearings (I)*, *supra* note 79, at 231.

²⁴⁷ For example, concern over the health effects of sulfates, which contributed significantly to the confusion in the EPA's sulfur dioxide control policy, [1976] 7 ENVIR. REP. (BNA) (Current Developments) 295-98, grew during the years after 1970 in light of new research. 1977 HOUSE REPORT, *supra* note 10, at 122-23.

²⁴⁸ The waffling on the smelter issue, *see* note 239 *supra*, can be attributed in part to lack of coordination within the EPA. *See 1970 Amendments Hearings (I)*, *supra* note 79, at 162, 302-03.

²⁴⁹ *See, e.g.*, *Clean Air Act Amendments of 1977 (Part IV): Hearings Before the Subcomm. on Environmental Pollution of the Senate Comm. on Environment and Public Works*, 95th Cong., 1st Sess. 33 (1977) (testimony of William Auberle of the Colorado Division of Air Pollution Control noting that his agency's credibility suffered when programs at the federal level were put forward and then withdrawn); Letter from Douglas Evans (Wisconsin Department of Natural Resources) to author (undated) (noting that considerable efforts were required to keep a state agency's regulatory authority in compliance with changing EPA requirements and to perform the other control work caused by EPA changes).

²⁵⁰ Deletion of the requirement found in the 1971 proposed implementation-plan guidelines that the states have by 1972 the necessary legal authority to establish inspection and maintenance programs apparently helped defeat enactment of such a measure by the Ohio legislature. *See 1970 Amendments Hearings (I)*, *supra* note 79, at 189-90 (statement of Frank Josselson, Assistant Attorney General of Ohio). Because of the state's failure to act, the EPA later had to promulgate an inspection and maintenance program for the metropolitan Cincinnati area. 40 C.F.R. § 52.1878 (1976).

²⁵¹ *See, e.g.*, *1974 Oversight Hearings (II)*, *supra* note 82, at 984; *Controls Hearings (I)*, *supra* note 84, at 479; *1970 Amendments Hearings (I)*, *supra* note 79, at 720-21; [1977] 6 ENVIR.

programs.²⁵² While exceptions are allowed, the burden of justification for a variance is a heavy one.²⁵³ The EPA's superior access to scientific and technical expertise, along with the feeling on its part that conditions did not vary significantly from region to region in ways relevant to the regulations, no doubt played a large role in producing the uniformity of the Agency's requirements.²⁵⁴ The EPA's perception of the validity of its positions at times conveyed more than a hint of arrogance toward state and local officials.²⁵⁵ Furthermore, formal channels, by which state and local governments could participate in the formulation of regulations applicable across the nation and, thereby, indicate to the EPA their unique needs and circumstances were not always available,²⁵⁶ a condition which Congress remedied to some extent in 1977.²⁵⁷ The regionalization program of the Agency, giving substantial decisionmaking power to ten regional administrators, was one attempt to keep in touch with local needs and structure actions accordingly.²⁵⁸ While this was applauded by some state officials,²⁵⁹ experience under this program was not altogether free from problems.²⁶⁰ In 1977 Congress felt compelled to require the EPA to issue regulations in order to ensure

REP. (BNA) (Current Developments) 1832 (letter from Jerry Reinwand, Alaska Department of Environmental Conservation); [1974] 5 *id.* at 523 (remarks of Charles Barden, Texas Air Control Board). No less than four of the respondents to the survey, described at note 235 *supra*, complained of EPA inflexibility of one kind or another. *Cf.* 1 NATIONAL RESEARCH COUNCIL, ANALYTICAL STUDIES FOR THE U.S. ENVIRONMENTAL PROTECTION AGENCY: PERSPECTIVES ON TECHNICAL INFORMATION FOR ENVIRONMENTAL PROTECTION 42 (1977) (noting that the EPA failed to consider the practicality of state and local implementation of its regulations).

²⁵² See, e.g., 40 C.F.R. pt. 51 (1977) (including appendices).

²⁵³ See, e.g., *id.* § 51.17a(b).

²⁵⁴ See Engel, et al., *Note On Intergovernmental Relations in Air Pollution Research*, 23 J. AIR POLL. CONT. A. 528 (1973).

²⁵⁵ See, e.g., *Controls Hearings (I)*, *supra* note 84, at 142 (alleging that the EPA was "very mandatory in their ways" and, sometimes "very, very obnoxious to work with"); Sterling, *supra* note 82, at 842.

²⁵⁶ See Engel, et al., *supra* note 254, at 528. See also Letter from Raymond G. Buergerin (Chief, Air Engineering & Enforcement Section, Kansas Department of Health & Environment) to author (May 9, 1977) (complaining of the EPA's failure to consult with state agencies when developing regulations which the EPA expects the states to enforce).

²⁵⁷ Clean Air Amendments, § 109(a), 42 U.S.C.A § 7411(g) (West Supp. 1978) (governors are authorized to petition the EPA for the promulgation and revision of new source performance standards and hazardous emission standards). The EPA is now trying to increase state and local participation in the development of regulations. [1977] 8 ENVIR. REP. (BNA) (Current Developments) 1360.

²⁵⁸ See DeFalco, *supra* note 84, at 837-39.

²⁵⁹ See, e.g., Remarks of Charles Barden (Texas Air Control Board), *reprinted in The Clean Air Act—A Time for Evaluation*, 25 J. AIR POLL. CONT. A. 688 (1975).

²⁶⁰ See, e.g., *Montana Power Co. v. EPA*, 429 F. Supp. 683 (D. Mont. 1977) (the EPA changed its position regarding interpretation of applicability of significant deterioration regulations); 1977 HOUSE REPORT, *supra* note 10, at 319, 325; *cf.* 1974 *Oversight Hearings (I)*,

that regionalization would not result in so much diversity between regions as to jeopardize equitable treatment of all of the states.²⁶¹

By conditioning grant funds for state air programs on consistency with federal objectives and priorities,²⁶² the EPA did not win friends among state officials who wanted to retain the latitude to structure their operations to conform to their own perceptions of local needs.²⁶³ State programs proposed for federal funding were also evaluated on the basis of their output commitments, such as the number of enforcement actions and investigations.²⁶⁴ This could only serve as another source of discontent in the case of administrators whose evaluations of the success of their efforts were based on different criteria. The extensive reporting requirements imposed on the states in an effort to audit their activities²⁶⁵ distracted scarce state manpower from more important functions, at least in the opinion of the states.²⁶⁶

Some of the irritations just described might have proved easier to live with had state air pollution control programs been adequately funded. They were not, however. Whether as a result of the Nixon and Ford Administrations' desires for general fiscal stringency, their view that air pollution control should not be high on the nation's list of priorities, or both, after fiscal year 1972 the federal share of the

supra note 176, at 292 (noting that during an air pollution emergency covering the Ohio-West Virginia area, EPA regional offices had a difficult time coordinating action).

²⁶¹ Clean Air Amendments, § 305(e), 42 U.S.C.A. § 7601(a)(2) (West Supp. 1978). See also 1977 SENATE REPORT, *supra* note 93, at 53-54; 1977 HOUSE REPORT, *supra* note 10, at 324-25.

²⁶² 40 C.F.R. §§ 35.404, .405 (1977). See also [1974] 4 ENVIR. REP. (BNA) (Current Developments) 1854.

²⁶³ See, e.g., *Controls Hearings (I)*, *supra* note 84, at 840. Two of the respondents to the survey, described at note 235 *supra*, indicated their dislike for federal orchestration of state programs through the grant mechanism.

²⁶⁴ E.g., 40 C.F.R. §§ 35.526, .527(b)(1) (1977). The EPA is apparently considering eliminating this emphasis on numerical output commitments. See [1977] 7 ENVIR. REP. (BNA) (Current Developments) 1940.

²⁶⁵ See, e.g., 40 C.F.R. § 51.7 (1977).

²⁶⁶ See, e.g., Sterling, *supra* note 82, at 843; 1974 *Oversight Hearings (I)*, *supra* note 176, at 292; 1974 *Budget Hearings*, *supra* note 82, at 177 (Environmental Protection Agency Administrator Russell Train admits that concern over excessive paperwork is valid). Five of the respondents to the survey, described at note 235 *supra*, complained of the excessive reporting requirements.

The EPA has recently examined the possibility of reducing the reporting and other paperwork requirements, though its findings do not appear to promise substantial improvement in this area. [1977] 7 ENVIR. REP. (BNA) (Current Developments) 1891, 1939-40. It is, nevertheless, still trying to reduce them. See [1977] 8 ENVIR. REP. (BNA) (Current Developments) 1358-59. One of the reasons for the excessive reporting requirements was seen as a lack of trust in the ability and willingness of states to address environmental problems in an orderly and effective manner. [1977] 7 ENVIR. REP. (BNA) (Current Developments) 1940.

costs of state and local air programs remained relatively constant at approximately \$51.5 million annually.²⁶⁷ This was the case despite the increasing pressure placed on state program resources as a result of new types of controls demanded by the EPA and the courts, and in the face of statistics consistently showing a large gap between state needs and the manpower and funds actually available.²⁶⁸ As if this were not enough, in 1974 the Office of Management and Budget directed the EPA to phase out state and local program grants starting in the 1976 fiscal year.²⁶⁹ The subsequent uproar was such that OMB was forced to reconsider its position,²⁷⁰ though the OMB consistently cut the EPA's requests for funds for itself and the states.²⁷¹ The Senate Public Works Subcommittee on Environmental Pollution heard extensive testimony regarding state and local needs for federal funding²⁷² and expressed concern over the administration's failure to request more money for air programs.²⁷³ Yet the financial situation remained basically unchanged.

It is far from clear whether the authorization for appropriations under the 1977 Amendments will prove adequate to meet the needs of the EPA and the states for funding to pursue both the existing programs and the expanded planning and implementation responsibilities called for by the amended statute.²⁷⁴ The new provision that

²⁶⁷ U.S. ENVIRONMENTAL PROTECTION AGENCY, STATE AIR POLLUTION IMPLEMENTATION PLAN PROGRESS REPORT, JULY 1 TO DECEMBER 31, 1975, at 63 (1976) [hereinafter cited as 1975 EPA PROGRESS REPORT—SECOND HALF].

²⁶⁸ *E.g.*, 1976 EPA PROGRESS REPORT, *supra* note 36, at 37 (noting that state and local agencies had available 66% of the manpower and 73% of the funds needed); U.S. ENVIRONMENTAL PROTECTION AGENCY, STATE AIR POLLUTION IMPLEMENTATION PLAN PROGRESS REPORT, JANUARY 1 TO JUNE 30, 1975, at 8-9 (1975) (noting that state and local agencies had 75% of the manpower and 77% of the funds available). The states were, of course, quick to point out the lack of adequate funding. *See, e.g.*, *The Environmental Protection Agency's Responsibilities in Relation to its Budget Request: Hearings Before the Subcomm. on Air and Water Pollution of the Senate Comm. on Public Works*, 93d Cong., 1st Sess. 237-38 (1973) [hereinafter cited as 1973 Budget Hearings]. *Cf.* Moeller, *The Crisis in Air Pollution Manpower Development*, 24 J. AIR POLL. CONT. A. 825 (1974) (noting that lack of federal financial support was causing an erosion of the quality of graduate level air pollution control programs).

²⁶⁹ Letter from Frederic Malek (Deputy Director of OMB) to Russell E. Train (Administrator of EPA) (Feb. 4, 1974), *reprinted in 1974 Budget Hearings*, *supra* note 82, at 3-5.

²⁷⁰ *See* Letter from Russell E. Train to each state's governor (Feb. 28, 1974), *reprinted in 1974 Budget Hearings*, *supra* note 82, at 193.

²⁷¹ The course of the EPA's continuing battle with OMB for adequate funding not only for the states, but also for its own programs, is well documented in a series of letters *reprinted in Regulatory Reform—Volume V: Hearings Before the Subcomm. on Oversight and Investigations of the House Comm. on Interstate and Foreign Commerce*, 94th Cong., 2d Sess. 107-34 (1976).

²⁷² *See, e.g.*, 1974 Oversight Hearings (II), *supra* note 82, at 313-14, 902, 909.

²⁷³ *See, e.g.*, 1974 Oversight Hearings, (I) & (II), *supra* notes 176 & 82, respectively, *passim*; 1973 Budget Hearings, *supra* note 268 *passim*.

²⁷⁴ Telephone interview with John Chicca (U.S. Environmental Protection Agency, Region

each state's annual program grant funds totaling at least one-half percent of the annual appropriation for all such grants²⁷⁵ may result in over-allocating funds to some states while denying them to others with greater resource needs.²⁷⁶ The Carter Administration's apparent preference for consolidated grants²⁷⁷ raises the further possibility of state air agencies having to fight with other state programs for a share of the federal dollar, a prospect dreaded by some control officials as a threat to viable air programs.²⁷⁸

ENFORCEMENT OF STANDARDS

Some of the most controversial aspects of the administration of the 1970 Amendments involved enforcement of the state-adopted or EPA-promulgated implementation plans to attain and maintain the national air quality standards. While some of these problems have apparently been laid to rest by the recent statutory changes, others are far from resolution.

V) (Jan. 16, 1978). Congress authorized \$200 million for fiscal year 1978 and for each of the three fiscal years thereafter, not including funds for research and development handled by a separate measure. An additional authorization of \$75 million is provided for grants to local officials for transportation planning necessitated by the new implementation-plan requirements. A further \$7.5 million is authorized for training of state and local air pollution control officials, among others, for fiscal year 1978 and for each of the three fiscal years thereafter. Clean Air Amendments, § 325, 42 U.S.C.A. § 7626 (West Supp. 1978). *See also* 1977 CONFERENCE REPORT, *supra* note 101, at 183. The percentage of the \$200 million authorization that will be used to support state and local programs is not specified.

As a point of comparison, the Clean Air Act authorization levels for the four fiscal years 1972-1975 totalled \$1.125 billion. Not all of that total was appropriated. For example, in fiscal year 1975 only \$155.19 million was appropriated of the \$300 million authorized. 1977 HOUSE REPORT, *supra* note 10, at 31.

The 1977 legislation also includes various other provisions designed to assist the states in their financing of air pollution control programs. The requirements for permit fees, *see* text accompanying notes 162-67 *supra*, is one of these. Yet, since these fees are to cover only the costs of the permit systems, they will obviously not defray the expenses of other state control programs. Second, no longer will federal grant funds be automatically withdrawn upon a reduction in a state's support for its air agency, at least as long as that reduction is "attributable to a nonselective reduction in expenditures in the programs of all executive branch agencies." Clean Air Amendments, § 102(a), 42 U.S.C.A. § 7405(b) (West Supp. 1978). Finally, the EPA may no longer charge fees to state and local officials for attendance at its training courses. *Id.* § 101(a), 42 U.S.C.A. § 7403(b) (West Supp. 1978). Such fees, as established in 40 C.F.R. § 5.1-.8 (1977), had been a serious bone of contention between the EPA and the states. *See generally* 1977 HOUSE REPORT, *supra* note 10, at 178-79.

²⁷⁵ Clean Air Amendments, § 102(b), 42 U.S.C.A. § 7405(c) (West Supp. 1978).

²⁷⁶ Telephone interview with John Chicca (U.S. Environmental Protection Agency, Region V) (Nov. 29, 1977).

²⁷⁷ *See* [1977] 8 ENVIR. REP. (BNA) (Current Developments) 132, 141.

²⁷⁸ *See, e.g.,* Sterling, *supra* note 82, at 843; [1977] 8 ENVIR. REP. (BNA) (Current Developments) 751.

Compliance by Federal Facilities

In view of the failure of the federal government's own agencies to diminish emissions from their facilities,²⁷⁹ Congress required in the 1970 Amendments that they comply with federal, state, interstate, and local "requirements respecting control and abatement of air pollution to the same extent that any person is subject to such requirements."²⁸⁰ In *Hancock v. Train*,²⁸¹ the Supreme Court held that federal sources need comply only with substantive emission limitations and not procedural requirements. The latter included permit systems for new and existing sources, the very aspects of many state programs used to determine what emission standards and compliance schedules to establish for existing sources and to insure that new sources in fact decreased their emissions.²⁸²

The EPA attempted to obtain the cooperation of other federal agencies in furnishing the states, as well as itself, with emission data and in voluntarily eliminating violations.²⁸³ However, the EPA program was not an overwhelming success.²⁸⁴ Nor were state control officials pleased with these efforts to the extent they hindered their own enforcement against the same sources.²⁸⁵ In 1977 Congress expressed its disapproval of the *Hancock* decision as contrary to its

²⁷⁹ See 1970 SENATE REPORT, *supra* note 91, at 23.

²⁸⁰ 42 U.S.C. § 1857f (1970) (amended 1977).

²⁸¹ 426 U.S. 167, 185-86 (1976).

²⁸² *Id.* at 183-84. The Court and the parties agreed, however, that federal sources were subject to state-imposed compliance schedules. *Id.* at 181. The Court went on to note that § 304, 42 U.S.C. § 1857h-2 (1970) (amended 1977), was the means provided in the statute for states to remedy noncompliance by federal facilities. 426 U.S. at 196.

²⁸³ The guidelines for this effort are found at 40 Fed. Reg. 20,664 (1975), which were promulgated under the impetus of Exec. Order No. 11,752, 3 C.F.R. 829 (1971-1975 Compilation), reprinted in 42 U.S.C. § 4331, at 3748 (Supp. V 1975).

²⁸⁴ See 1977 HOUSE REPORT, *supra* note 10, at 199 (noting that many federal agencies and facilities had been "laggard or have obstinately refused to obtain required permits, to submit required reports, to conduct required monitoring, to permit on-site inspections, and even to meet compliance schedules and emission limits"). See also [1977] 8 ENVIR. REP. (BNA) (Current Developments) 444 (having spent months trying to obtain voluntary TVA conformity with applicable sulfur dioxide regulations, the EPA sought to intervene in a pending citizen's suit to force compliance).

²⁸⁵ In response to the survey, described in note 235 *supra*, one control official complained to the author that the EPA "consent agreements" negotiated with federal facilities interfered with local enforcement under 42 U.S.C. § 1857h-2 (1970) (amended 1977). In *District of Columbia v. Train*, 533 F.2d 1250 (D.C. Cir. 1976), the District of Columbia unsuccessfully sought judicial review of an EPA "consent agreement" with the General Services Administration (GSA). That "agreement" was an attempt to resolve a dispute between the District of Columbia and the GSA over the latter's failure to comply with a compliance schedule which the GSA and the District of Columbia had negotiated. The GSA disregarded a new schedule issued by the District of Columbia in an enforcement order, taking the position rejected in *Hancock* that the order was a "procedural requirement."

intent in 1970²⁸⁶ and explicitly reiterated that federally owned and operated sources had to comply with state and local substantive and procedural requirements.²⁸⁷ Whether federal agencies will now act voluntarily to bring operations into compliance remains to be seen.²⁸⁸

Enforcement Against the States

In view of the failure of many states to submit approvable implementation plans to achieve the national standards for photochemical oxidants and carbon monoxide,²⁸⁹ the EPA in 1973 promulgated extensive transportation control measures. These included provisions for the establishment of bike-lanes, traffic restrictions, limitations regarding on-street parking, and inspection and maintenance plans to insure that emissions from automobiles were kept to a minimum. Viewing state-owned highways as emission sources and state transportation policies as substantial causes of automobile-related pollution,²⁹⁰ the EPA took the position that it could compel the states to take the steps required to carry out the federal transportation controls.²⁹¹ One rationale for the EPA approach has been the lack of resources at the federal level to ensure that the federal strate-

²⁸⁶ 1977 SENATE REPORT, *supra* note 93, at 58; 1977 HOUSE REPORT, *supra* note 10, at 197-99.

²⁸⁷ Clean Air Amendments, § 116(a), 42 U.S.C.A. § 7418 (West Supp. 1978). Federal facilities must comply with any air pollution requirements, whether substantive or procedural, including those relating to recordkeeping or reporting, the exercise of any federal, state, or local administrative authority, and any process or sanction, whether enforced in federal, state, or local courts or in any other manner. *Id.* See also *id.* § 303(c), 42 U.S.C.A. § 7604(e) (West Supp. 1978). Moreover, when the EPA delegates authority to states to enforce NSPS and NESHAPS, states may now regulate federal facilities under those standards. *Id.* § 109(d)(1)(2), 42 U.S.C.A. §§ 7411(c)(1), 7412(d)(1) (West Supp. 1978).

²⁸⁸ See [1977] 8 ENVIR. REP. (BNA) (Current Developments) 964 (72 major federal facilities reported to be not in compliance with applicable air pollution control regulations).

If the state or local agencies do not act to abate violations by federal facilities, the EPA itself may institute enforcement action against the offending sources pursuant to § 113 of the statute. 42 U.S.C.A. § 7413 (West Supp. 1978); *id.* § 7602(e) (person defined to include any agency, department, or instrumentality of the United States). See also 1977 HOUSE REPORT, *supra* note 10, at 220.

²⁸⁹ See U.S. ENVIRONMENTAL PROTECTION AGENCY, PROGRESS IN THE PREVENTION AND CONTROL OF AIR POLLUTION IN 1974, ANNUAL REPORT OF THE ADMINISTRATOR OF THE ENVIRONMENTAL PROTECTION AGENCY TO THE CONGRESS 15 (1975) (all or part of 30 plans were initially promulgated by the EPA to deal with automobile-related pollutants). See note 39 *supra*.

²⁹⁰ See LEGAL OPINIONS, *supra* note 135, at 64-66.

²⁹¹ 40 C.F.R. § 52.23 (1977). The basic pattern of an EPA transportation control regulation was to set forth the general parameters for a control strategy and require the state to adopt regulations and take other steps necessary to set up the program. See, e.g., 40 C.F.R. § 52.490 (1977) (inspection-maintenance regulation for the District of Columbia).

gies would be implemented, coupled with reduction of possible duplication of effort where a state program could be adjusted to implement the federal requirements. In addition, state and local implementation appeared to carry out congressional intent more faithfully than federal administration of the programs.²⁹²

It was by no means clear that the 1970 Amendments provided a basis for the construction adopted by the EPA and, if so, that it did not violate the tenth amendment²⁹³ as a forbidden federal intrusion into the sphere of state sovereignty. With one United States court of appeals having ruled in favor of the EPA²⁹⁴ and three others having, in varying degrees, rejected its position,²⁹⁵ an authoritative resolution of the important issues of federalism thus raised was expected from the Supreme Court. However, in *EPA v. Brown*²⁹⁶ the Court refused to rule on them in view of proposed changes in the challenged EPA regulations. Given the extensive commentary and analysis provoked by these court decisions,²⁹⁷ further analysis here

²⁹² 38 Fed. Reg. 30,632-33 (1973); LEGAL OPINIONS, *supra* note 135, at 65.

²⁹³ U.S. CONST. amend. X.

²⁹⁴ *Pennsylvania v. EPA*, 500 F.2d 246 (3d Cir. 1974).

²⁹⁵ *Maryland v. EPA*, 530 F.2d 215 (4th Cir. 1975); *District of Columbia v. Train*, 521 F.2d 971 (D.C. Cir. 1975); *Arizona v. EPA*, 521 F.2d 825 (9th Cir. 1975); *Brown v. EPA*, 521 F.2d 827 (9th Cir. 1975). All of these decisions were vacated *sub nom.* *EPA v. Brown*, 431 U.S. 99 (1977) (per curiam). Compare the foregoing decisions with *Friends of the Earth v. Carey*, 552 F.2d 25 (2d Cir.), *cert. denied*, 434 U.S. 902 (1977) (state of New York could be ordered to implement a plan which it devised and EPA approved on a "consent" theory).

²⁹⁶ 431 U.S. 99 (1977) (per curiam).

²⁹⁷ See, e.g., Currie, *supra* note 12, at 390-94; Gordon, *When Push Comes to Infringement of State Sovereignty: Implementation of EPA's Transportation Control Plans*, 1976 WIS. L. REV. 1111; Salmon, *The Federalist Principle: The Interaction of the Commerce Clause and the Tenth Amendment in the Clean Air Act*, 2 COLUM. J. ENV'T'L L. 290 (1976); Stewart, *Pyramids of Sacrifice? Problems of Federalism in Mandating State Implementation of National Environmental Policy*, 86 YALE L.J. 1196 (1977); Stewart, *The Development of Administrative and Quasi-Constitutional Law in Judicial Review of Environmental Decision-making: Lessons from the Clean Air Act*, 62 IOWA L. REV. 713, 758-62 (1977); Note, *Coercive Enforcement of the Clean Air Act: A Clash of Constitutional Principles*, 3 COLUM. J. ENV'T'L L. 153 (1976) [hereinafter cited as COLUMBIA Note]; Note, *The Clean Air Act Amendments of 1970: A Threat to Federalism*, 76 COLUM. L. REV. 990 (1976); Comment, *Protection of the Environment and Protection of the States: The Constitutional Issue Raised by EPA Action Under the Clean Air Act*, 7 ENV'T'L L. 384 (1977); Comment, *The Clean Air Amendments of 1970: Can Congress Compel State Cooperation in Achieving National Environmental Standards?*, 11 HARV. C.R.-C.L.L. REV. 701 (1976) [hereinafter cited as HARVARD C.R. Comment]; Comment, *State Responsibility for the Administration of Federal Programs under the Clean Air Amendments of 1970: A Statutory and Constitutional Analysis*, 36 MD. L. REV. 586 (1977); Comment, *Transportation Control Plans: Secondary Measures to Control Automobile Pollution*, 8 TEX. TECH. L. REV. 361 (1976); Note, *Enforcement Controversy Under the Clean Air Act: State Sovereignty and the Commerce Clause*, 8 TRANSP. L.J. 383 (1976); Comment, *Federalism and Clean Air: In Dubious Battle*, 1975 UTAH L. REV. 969 [hereinafter cited as UTAH Comment]; 1976 B.Y.U. L. REV. 189; 53 TEX. L. REV. 380 (1975); 11 TULSA L.J. 291 (1975); 29 VAND. L. REV. 276 (1976).

of the constitutional problems presented could not add substantially to what has already been argued. It should be noted, however, that the EPA's position has not been without its supporters in this scholarly debate.²⁹⁸ Since the EPA continues to maintain that it may compel state implementation of federal plans,²⁹⁹ it seems very likely that the Supreme Court will again be called upon to decide both the statutory and constitutional issues.

While the legislative history of the 1970 Amendments proved to be a slender straw to lean upon as support for the EPA's interpretation of that statute,³⁰⁰ both the 1977 House Report³⁰¹ and an explanatory statement by the Senate manager of the 1977 Amendments³⁰² incorporated almost verbatim the EPA's previous arguments in favor of federal enforcement to compel state implementation of federally promulgated plans. Nor did these expressions of intent provoke disagreement during the floor debates on the amendments. With one possible exception mentioned below,³⁰³ it, therefore, appears that Congress intends that federal enforcement against the states be one of the available means to achieve the air quality goals of the statute.³⁰⁴

²⁹⁸ See COLUMBIA Note, note 297 *supra*; HARVARD C.R. Comment, note 297 *supra*; UTAH Comment, note 297 *supra*.

²⁹⁹ 42 Fed. Reg. 30,505 n.15 (1977).

³⁰⁰ See Gordon, *supra* note 297, at 1142 (noting that the Act itself is ambiguous on the issue and that the legislative history is little help in resolving it).

³⁰¹ 1977 HOUSE REPORT, *supra* note 10, at 288, 290, 315-16. See also 123 CONG. REC. H11,956, H11,958 (daily ed. Nov. 1, 1977) (statement of intent submitted by Rep. Rogers to accompany various technical amendments to the 1977 Amendments). The latter notes that inspection and maintenance plans are now specifically enforceable under the citizen's suit provision of the statute, 42 U.S.C.A. § 7604 (West Supp. 1978).

³⁰² 123 CONG. REC. S9168 (daily ed. June 8, 1977) (remarks of Sen. Muskie). The Supreme Court recently relied on the legislative history of the 1977 Amendments to interpret particular provisions of the 1970 Amendments (§ 112 dealing with hazardous emission standards). *Adamo Wrecking Co. v. United States*, 434 U.S. 275, 289 (1978) (Powell, J., concurring).

³⁰³ See text accompanying notes 305-09 *infra*.

³⁰⁴ The sources cited in notes 301-02 *supra* would also appear to support EPA enforcement to compel implementation by states of plans they design on their own.

Following the Supreme Court's remand in *EPA v. Brown*, 431 U.S. 99 (1977), the Ninth Circuit found that issues relating to the EPA-promulgated inspection and maintenance regulations for California which had been revised (42 Fed. Reg. 30,504 (1977)) were ripe for decision. It again refused to interpret the Clean Air Act to authorize EPA enforcement against the states. *Brown v. EPA*, 566 F.2d 665 (9th Cir. 1977). The court's reasoning rested in substantial part on the fact that § 208 of the 1977 House bill (H.R. 6161), to which the 1977 HOUSE REPORT, *supra* note 10, at 288-90, related, was not enacted. That provision mandated state adoption of inspection and maintenance programs in areas where implementation plans in effect in 1975 contained transportation controls. The court overlooked, however, that the statute, as finally enacted, does mandate the development of inspection and maintenance programs in areas where the ambient standards for automobile-related pollutants will not be attained by 1982.

Where an EPA-promulgated plan spells out in detail the regulatory framework for a particular transportation control strategy and no additional legislation or regulations are necessary, the Agency can force the state to act pursuant to those regulations.³⁰⁵ One issue which the 1977 legislative history does not resolve is the extent to which the EPA is authorized to order states to enact legislation and promulgate regulations necessary to implement federally mandated programs.³⁰⁶ Subsequent to the Supreme Court's decision in *EPA v. Brown*, but prior to the enactment of the 1977 Amendments, the EPA removed from its regulations specific requirements that states adopt and make necessary changes in legislation and regulations in order to set up the federally promulgated vehicle inspection and maintenance programs.³⁰⁷ It did so in view of various legal objec-

See Clean Air Amendments, § 129(b), 42 U.S.C.A. § 7502(b)(11)(B) (West Supp. 1978). While the regions potentially affected by §§ 208 & 172(b)(11)(B) might differ to some extent and the version enacted originated in the Senate bill (S. 252), there is no reason to believe that the statements in the House Report regarding § 208 are not equally applicable to the statute, as amended, and generally indicative of congressional intent. Section 208 did not specifically provide for EPA enforcement against a state for failure to implement such a program. That remedy was left to § 113, *see* 1977 HOUSE REPORT, *supra* note 10, at 290, which the House did not propose to alter in any way relevant to the state enforcement issue, a fact which, together with the portions of the House Report referred to previously, plainly shows that the House believed that the EPA had authority under the Act prior to the 1977 Amendments to enforce implementation plans against the states. The Ninth Circuit, moreover, failed to take note of the statement of Representative Paul Rogers and the amendment to § 304, *see* note 301 *supra*, which clearly show the intent that inspection and maintenance plans be enforceable. It similarly ignored the portions of the House Report which support federal enforcement against the states of plans which do not necessarily involve inspection and maintenance. 1977 HOUSE REPORT, *supra* note 10, at 315-16.

It is submitted that the EPA is correct in arguing that § 113(a)(1) is the explicit statutory provision on which federal enforcement against the states, at least in the transportation control area, may rest. The states' ownership of highways and roads permits analogizing them to private businesses which control sources of pollution. A state's failure to adopt or implement measures mandated by the EPA to control pollution emanating from highway sources can, literally speaking, qualify as a violation of an applicable implementation plan within the meaning of § 113(a)(1).

³⁰⁵ The court in *District of Columbia v. Train*, 521 F.2d 971, 987-88 (D.C. Cir. 1975), *vacated on other grounds per curiam sub nom.* *EPA v. Brown*, 431 U.S. 99 (1977), held to the contrary on constitutional grounds with respect to certain aspects of the EPA plan at issue.

³⁰⁶ The statement of Senator Muskie, note 302 *supra*, supports EPA authority to promulgate transportation control measures requiring states to take action where necessary without indicating what that "action" may involve. The 1977 HOUSE REPORT, note 10 *supra*, is silent on the issue.

The court in *Maryland v. EPA*, 530 F.2d 215, 224 (4th Cir. 1975), *vacated on other grounds per curiam sub nom.* *EPA v. Brown*, 431 U.S. 99 (1977), labelled the EPA regulations mandating the states to enact legislation and issue regulations "astonishing" and found no precedent for it. This is obviously an issue not only of congressional intent, but also of constitutional power. *Id.* at 226-27.

³⁰⁷ 42 Fed. Reg. 30,504 (1977).

tions to those requirements raised by the courts of appeals decisions noted above.³⁰⁸ The revised regulations, nevertheless, implicitly require that the states take the legal action necessary to establish the regulatory framework for those programs.³⁰⁹

Encouraging states to act in accordance with the statutory mandates³¹⁰ and taking a lead from the suggestions of the courts³¹¹ and commentators,³¹² Congress has now explicitly required the EPA to withhold funds available to a state under the Act if it fails to make reasonable efforts to formulate an adequate revised plan to control automobile-related pollutants.³¹³ Such withholding is also required in the case of a state or local government which fails to implement a control strategy, whether the controls are approved or promulgated by the EPA.³¹⁴ Crippling a state's air program represents doubtful logic in the circumstances.³¹⁵ As a result, this sanction may prove to be more theoretical than real. On the other hand, the new provision requiring the withholding of federal highway funds if a state does not make reasonable efforts to submit a revised transportation control plan makes more sense.³¹⁶ Its invocation is carefully circumscribed in order to avoid hindrance to reduction of air pollution.³¹⁷ It may, in fact, prove to be a very effective incentive to state action to reduce automobile-related pollution.

³⁰⁸ *Id.* at 30,504-05.

³⁰⁹ *Cf. Brown v. EPA*, 566 F.2d 665, 669 (9th Cir. 1977) ("while it is true that the revised regulation leaves to the state a wide range of choice in selecting the means by which it will discharge its duties, even the EPA acknowledges, as it must, that the revised inspection and maintenance regulation 'imposes an affirmative duty on the State of California.'"). The regulations now contain merely a directive that the affected states establish the programs, along with criteria for an acceptable program. *But see* [1977] 7 ENVIR. REP. (BNA) (Current Developments) 1348 (EPA admits in its brief in *EPA v. Brown*, 431 U.S. 99 (1977), that it cannot compel states to enact laws or promulgate regulations). While such a direction might endow state agencies with the authority to establish an inspection and maintenance scheme irrespective of state statutory authorization, *see* text accompanying notes 149-51 *supra*, that does not obviate the need for specified regulations to fill in the program detail. If the states fail to enact those regulations under the authority of the federal statute, presumably the EPA would sue to force the adoption of the necessary rules.

³¹⁰ 1977 HOUSE REPORT, *supra* note 10, at 290.

³¹¹ *District of Columbia v. Train*, 521 F.2d at 993 n.26.

³¹² 53 TEX. L. REV. 380, 386 (1975); 11 TULSA L.J. 291, 295 (1975).

³¹³ Clean Air Amendments, § 129(b), 42 U.S.C.A. § 7506(a) (West Supp. 1978).

³¹⁴ *Id.* § 129(b), 42 U.S.C.A. § 7506(b) (West Supp. 1978).

³¹⁵ *See generally* NATIONAL RESEARCH COUNCIL, *supra* note 251, at 52 (criticizing the grant withdrawal approach).

³¹⁶ Clean Air Amendments, § 129(b), 42 U.S.C.A. § 7506(a) (West Supp. 1978).

³¹⁷ The withdrawal does not apply to funds for safety, mass transit, or transportation improvement projects related to air quality improvement or maintenance. *Id.*

Finally, perhaps the most important of the new incentives to state action are the provisions regarding the location of new sources in so-called "nonattainment areas." After June 30, 1979, no new major source may be constructed, nor may an existing source be modified so that it emits more pollutants, in an area exceeding one or more of the national standards if the emissions from that source would cause or contribute to concentrations of any pollutant whose national standard is exceeded in such area. An exception to this prohibition applies where the state has established and is carrying out a control strategy sufficient to attain those standards by the dates specified by the 1977 Amendments.³¹⁸ The impetus that these provisions give to states' formulations of such implementation plans may turn out to be considerably less than appears at first glance, however. Where a state fails to adopt an approvable control strategy applicable to a nonattainment area, the EPA is required to promulgate emission controls for that area to assure attainment of the ambient standards by the dates specified in the statute.³¹⁹ The statutory scheme, as well as some of the legislative history, indicates that, even under such an EPA-devised plan, new major sources can be constructed, though there is some indication of congressional intent to the contrary.³²⁰ Furthermore, it is not clear whether, if new sources can be constructed in areas subject to a federal plan, such construction would be more restricted than if the state itself had designed the plan.³²¹ On the other hand, it is clear that, where a

³¹⁸ *Id.* § 108(b), 42 U.S.C.A. § 7410(a)(2)(I) (West Supp. 1978); *id.* § 129(b), 42 U.S.C.A. § 7503 (West Supp. 1978). See also *id.* § 306, 42 U.S.C.A. § 7616 (West Supp. 1978) (which authorizes the EPA to withhold federal funds for new sewage treatment facilities where, for example, the state does not have in effect or is not implementing a plan approved by the EPA permitting the increase in emissions resulting from the new facilities).

³¹⁹ See, e.g., *id.* § 129(b), 42 U.S.C.A. § 7502(b)(2) (West Supp. 1978); 123 CONG. REC. S13,702 (daily ed. Aug. 4, 1977) (statement of Sen. Muskie).

³²⁰ The statute does not in explicit terms require that the plan be one devised by the state in order to lift the ban on new construction. See, e.g., 42 U.S.C.A. § 7502 (West Supp. 1978) (referring to an "applicable implementation plan" as one approved "or promulgated" by the EPA). Furthermore, permit programs for major new sources are required as parts of plans for nonattainment areas. *Id.* § 7502(b)(6). Senator Muskie believed that new major sources could be constructed in an area subject to an EPA-promulgated plan. See 123 CONG. REC. S13,702 (daily ed. Aug. 4, 1977). However, Representative Rogers thought differently:

[T]here can be no doubt under the 1977 Amendments that a state must adopt, implement and enforce a VIM [vehicle inspection and maintenance] program as a condition for getting a post-1982 attainment date for oxidants or carbon monoxide. If a State fails to do so, then permits for new or modified major stationary sources clearly may not be issued in nonattainment areas in the post-1982 period.

Id. H11,958 (daily ed. Nov. 1, 1977).

³²¹ Senator Muskie believed that under an EPA-promulgated plan new major source growth could be permitted only by determining in each case whether reductions of emissions from existing facilities in the area would more than offset the increase in emissions which

state submits a plan for a nonattainment area which is approved by the EPA, the state's failure thereafter to carry out that plan brings to a halt the building of new major sources in the region.³²²

Dualistic Enforcement

Both the EPA and the states are authorized to enforce implementation plans, whether they are adopted by the states and approved by the EPA or promulgated by the EPA.³²³ Since Congress has declared that air pollution abatement is the primary responsibility of state and local government,³²⁴ the EPA's general enforcement policy has been to take action only when a state has been unable or unwilling to act.³²⁵ The EPA's oversight of state enforcement programs has, however, been substantial despite the protests of some state officials. In some cases the federal enforcement authority, either by its actual or threatened exercise or by its mere existence, has assisted state and local agencies by putting pressure on sources to come to terms with them on abatement schedules.³²⁶ It has also im-

would be caused by the operation of the new major source. 123 CONG. REC. S13,702 (daily ed. Aug. 4, 1977). Yet the statute, literally construed, appears to permit a choice between that approach and the option of designing a plan which has a built-in margin for growth by major new sources. See Clean Air Amendments, § 129(b), 42 U.S.C.A. § 7503 (West Supp. 1978). Whether, in practice, one approach will prevent the construction of more sources than the other cannot be determined in advance.

³²² 42 U.S.C.A. § 7503 (West Supp. 1978).

³²³ For the provisions authorizing federal enforcement, see *id.* § 7413. The authority of states to enforce federally promulgated plans is discussed at note 9 *supra*.

³²⁴ 42 U.S.C.A. § 7401(a)(2) (West Supp. 1978).

³²⁵ See, e.g., U.S. ENVIRONMENTAL PROTECTION AGENCY, STATE AIR POLLUTION IMPLEMENTATION PLAN PROGRESS REPORT, JANUARY 1 TO JUNE 30, 1974, at 46 (1974).

³²⁶ See, e.g., 1973 Oversight Hearings (II), *supra* note 80, at 616 (statement of Fred Hart, Commissioner, Department of Air Resources, New York City Environmental Protection Administration); Sterling, *supra* note 82, at 841. But see Letter from Douglas Evans (Wisconsin Department of Natural Resources) to author (undated) (stating that he had little reason to believe that enforcement by the state was enhanced by the threat of federal intervention).

The increase in the use of sulfur dioxide removal equipment by electric utilities may, in fact, be attributed in large part to EPA enforcement efforts against power plants. Following a hearing in the fall of 1973 which was called to examine the technological and economic feasibility of flue-gas desulfurization techniques and the EPA's conclusion from the testimony presented that such control devices were available for economical use, the Agency commenced a nationwide enforcement program to obtain compliance with applicable sulfur dioxide regulations. In many of these cases, compliance required flue-gas desulfurization techniques ("scrubbers"). EPA ENFORCEMENT, *supra* note 34, at 11. At the time of the hearings in 1973, only 44 scrubber units were installed, under construction, or planned. By December, 1975, 115 plants either had systems operational (28), under construction (18), or in stages of planning (69). *Id.* at 12. No doubt state enforcement efforts also contributed to this result. See [1977] 7 ENVIR. REP. (BNA) (Current Developments) 1324.

posed federal compliance schedules where the states could not act.³²⁷ Nevertheless, federal enforcement has proved to be a source of frustration for state and local agencies in other cases.³²⁸ Potential or actual second-guessing by the EPA regarding whether a particular state or local enforcement order is satisfactory can undermine and, allegedly in several instances, has undermined, state and local ability to deal effectively with industry.³²⁹ As long as a source is not sure whether the federal government will independently take an enforcement action against it, there is less incentive for it to reach an agreement with the state or local agency on abatement measures.³³⁰

After a confusing reversal of position,³³¹ the EPA proposed

³²⁷ See, e.g., *Getty Oil Co. v. Ruckelshaus*, 342 F. Supp. 1006 (D. Del.), *remanded*, 467 F.2d 349 (3d Cir. 1972), *cert. denied*, 409 U.S. 1125 (1973).

³²⁸ No less than nine respondents to the survey, described at note 235 *supra*, complained of EPA intervention in the enforcement area as follows:

1. "The most serious problems are duplication of effort in enforcement and planning. Rather than being supplemental to and supportive of state actions, EPA efforts have often conflicted."
2. "EPA has undertaken a number of enforcement actions here without first consulting the State, resulting in disruption of the State's enforcement actions."
3. "Duplication efforts by the States and EPA in planning and enforcement . . ." was one of major inefficiencies.
4. Clean Air Act scheme has proved inefficient "[b]ecause of duplication, especially between state and federal agencies in enforcement."
5. "Federal involvement directly with sources rather than through local agency increases confusion and antagonism."
6. One of the major inefficiencies of the Clean Air Act scheme has been "duplication of enforcement actions and contacts since [we] really have overlapping jurisdictions. These duplicate efforts sometimes compromise each other. . . . In some instances an industry can play one agency against another."
7. "The major 'inefficiency' has resulted from Federal/State/Local jurisdiction of the same areas, i.e., compliance permits for stationary sources."
8. "The federal gov. [sic] insists on issuing identical enforcement orders on certain long term or complex cases, nevertheless it does represent double tracking. . . . [In] [m]any cases the State was in the process of taking an action with the same result."
9. One of the major inefficiencies has been "technical duplications in issuing compliance orders . . ."

³²⁹ One state official responding to the survey, described at note 235 *supra*, specifically noted that issuance of conflicting orders by the state and the EPA had "hindered the credibility" of his agency. See also *Controls Hearings (I)*, *supra* note 84, at 479-80 (complaint by Los Angeles Air Pollution Control District regarding EPA review of locally developed source compliance schedules.); C. JONES, *supra* note 15, at 280-92 (describing the EPA's initial rejection of an order worked out by local officials with United States Steel Corp. for abatement of various emission problems at the latter's Clairton, Pennsylvania, works). Cf. *United States v. Independent Stave Co.*, 406 F. Supp. 886 (W.D. Mo. 1975) (the EPA instituted criminal enforcement action where state believed there was no violation; jury acquitted defendant on three counts and the court dismissed another count on procedural grounds). At one point, the EPA proposed encouraging greater state enforcement by embarrassing state agencies which did not actively enforce their regulations. [1975] 6 ENVIR. REP. (BNA) (Current Developments) 301.

³³⁰ The problem of confusion by sources as to which level of government to negotiate with is described in *1974 Oversight Hearings (I)*, *supra* note 176, at 307 (statement of Dr. Ira L. Whitman, Director, Ohio EPA).

³³¹ Compare 39 Fed. Reg. 34,533, 34,572 (1974) (which, had they been promulgated, would have barred state enforcement orders whose final compliance dates extended beyond the dates

guidelines in 1975, which were designed to assist other enforcement agencies, as well as sources in determining whether certain state or locally issued enforcement orders would forestall federal enforcement.³³² At the same time, however, the EPA announced that it would feel perfectly free to issue orders duplicating state orders where a source wanted the EPA's formal stamp of approval or, more importantly, where the EPA doubted the ability or, perhaps, the willingness of the state to require strict compliance with its own orders.³³³ The enervating potential for federal second-guessing therefore remained.³³⁴ Nor did Congress remedy this problem in 1977.³³⁵

The judicial gloss placed on the federal enforcement provisions of the 1970 Amendments has clarified to a certain degree the relationship between state and federal governments in the stationary source enforcement area. Thus, the mere pendency before state administrative or judicial authorities of a petition by a source for a

established for attainment of the national ambient standards) *with* 40 Fed. Reg. 14,876 (1975) (which disclaimed any intent by the EPA to foreclose a state's issuance of such an order as long as it met certain federal criteria). The original EPA position had been based on the reasoning adopted by the First Circuit in *Natural Resources Defense Council, Inc., v. EPA*, 478 F.2d 875 (1st Cir. 1973), though the Agency chose to overlook that such reasoning applied equally well to its own enforcement authority. While the EPA later denied it, *see* 40 Fed. Reg. 14,876 (1975), it was clear that a double standard was at work. *See* [1974] 5 ENVIR. REP. (BNA) (Current Developments) 1130 (statement by Richard Wilson, Director of the EPA's Division of Stationary Source Enforcement).

It soon became obvious, however, that the EPA could not alone issue all of the orders necessary to put sources on legally enforceable compliance schedules. The EPA, therefore, reversed position. 40 Fed. Reg. 14,876 (1975). In 1977, Congress explicitly disapproved the practice of using § 113(a) of the statute to extend final compliance of sources beyond the ambient air quality attainment dates. 1977 SENATE REPORT, *supra* note 93, at 45; 1977 HOUSE REPORT, *supra* note 10, at 55-56. It did, however, enact a formal mechanism for issuance of orders by the states and the EPA to allow sources to come into compliance after the applicable attainment dates. *See* Clean Air Amendments, § 112, 42 U.S.C.A. § 7413(d) (West Supp. 1978). For further discussion of this new statutory provision, see text accompanying notes 352-60 *infra*.

³³² 40 Fed. Reg. 14,876 (1975). Those guidelines required compliance by the source "as expeditiously as practicable" in accordance with "increments of progress." Public hearings were to be held on the schedules. When requested, the EPA would review a proposed state schedule before its issuance.

³³³ *Id.* at 14,879-80.

³³⁴ Note also that these guidelines applied only in the case of state enforcement orders whose final compliance dates were later than the applicable ambient air quality attainment dates.

³³⁵ *See* Clean Air Amendments, §§ 111, 112, 42 U.S.C.A. § 7413 (West Supp. 1978). The EPA itself recognizes the dangers of inconsistent state-federal action under the 1977 Amendments, for example, where one level of government issues a delayed compliance order while the other sues to force immediate compliance. *See* [1977] 8 ENVIR. REP. (BNA) (Current Developments) 113.

variance from the federally approved implementation plan provisions does not generally provide a sufficient justification for the stay of federal enforcement of the plan against that source.³³⁶ The state would have to grant the variance and the EPA formally approve it as consistent with the federal statutory requirements for plan revisions before a stay, temporary or permanent, would be appropriate.³³⁷ Similarly, while a state may be proceeding against a source by a civil action to enforce the emission regulations contained in its implementation plan, enforcement seeking criminal sanctions for the same or related violations may continue in the federal courts, at least through the grand jury stage.³³⁸ State issuance of an enforcement order may not provide a sufficient basis to prevent the EPA's subsequent issuance of a substantially similar order under section 113(a)³³⁹ to the

³³⁶ *West Penn Power Co. v. Train*, 378 F. Supp. 941 (W.D. Pa. 1974), *aff'd*, 522 F.2d 302 (3d Cir. 1975), *cert. denied*, 426 U.S. 947 (1976); *Getty Oil Co. v. Ruckelshaus*, 342 F. Supp. 1006 (D. Del. 1972), *remanded*, 467 F.2d 349 (3d Cir. 1972), *cert. denied*, 409 U.S. 1125 (1973). *Cf. Metropolitan Wash. Coalition for Clean Air v. District of Columbia*, 511 F.2d 809 (D.C. Cir. 1975), *rev'g and remanding* 373 F. Supp. 1089 (D.D.C. 1974) (another § 304 suit); *Friends of the Earth v. Potomac Elec. Power Co.*, 419 F. Supp. 528 (D.D.C. 1976) (citizen suit under § 304). *But see Union Elec. Co. v. EPA*, No. 78-0164C (E.D. Mo., opinion filed March 16, 1978), *appeal docketed*, No. 78-1357 (8th Cir. May 17, 1978) (where, however, the EPA had already indicated that the variances at issue would probably be approvable). *But cf. Duquesne Light Co. v. EPA*, 481 F.2d 1 (3d Cir. 1973) (where petitioners did not have adequate opportunity for hearing prior to EPA approval of implementation plan, the EPA was ordered to stay enforcement pending the petitioners' pursuing the state variance route or the EPA's holding a hearing on the plan). *Compare Duquesne Light Co. with Ohio Environmental Council v. U.S. District Court*, 565 F.2d 393 (6th Cir. 1977) (stay of § 304 enforcement improper though plan revisions were pending).

³³⁷ *See Train v. Natural Resources Defense Council, Inc.*, 421 U.S. 60, 90 (1975) ("[A] polluter is subject to existing requirements until such time as he obtains a variance, and variances are not available under the revision authority until they have been approved by both the state and the Agency."). The 1977 Amendments do not change this result. *See Clean Air Amendments*, § 108(g), 42 U.S.C.A. § 7410(g) (West Supp. 1978).

³³⁸ *In re Grand Jury Proceedings (U.S. Steel-Clairton Works)*, 525 F.2d 151 (3d Cir. 1975). The Third Circuit vacated a district court order which stayed further proceedings of federal grand jury pending final judgment in a civil contempt action brought against U.S. Steel by state and county officials in state court. The court's vacation of the stay was based on the view that such a stay was an unwarranted encroachment on the "plenary historical authority of the grand jury." 525 F.2d at 157. It apparently relied, in part, on the possibility that the violations involved in the federal and state proceedings might differ. The court refused to rule, however, on whether Congress intended "to authorize dualistic enforcement proceedings against polluters based upon the same violations of emission limitations which are incorporated in the same implementation plan." *Id.* at n.25. *See also Currie, supra* note 12, at 365, 407 (state enforcement does not bar federal proceeding).

³³⁹ 42 U.S.C. § 1857c-8(a) (1970 & Supp. V 1975) (amended 1977). Such an order must require compliance in a reasonable time but prior to the attainment dates for the ambient standards. Orders delaying compliance beyond such dates must be issued under the authority of § 113(d). *See text accompanying notes 352-60 infra*.

same source.³⁴⁰ On the other hand, in a case where a state was proceeding with a civil action, one federal court found abstention proper when asked to enforce by injunction the same federally approved regulation against the same source that was involved in the state proceeding.³⁴¹ An interpretation of the allegedly vague state-adopted regulation by the state agency might, it was reasoned, avoid the need for the federal court to decide the constitutional question presented.³⁴²

Abstention or stay of action by the federal courts on other rationales in the case of concurrent federal-state enforcement might be appropriate in some instances.³⁴³ For example, even without the presence of a constitutional issue, questions regarding the correct interpretation of a state-adopted, though federally approved, regulation might be more appropriately resolved in the state courts or administrative process. The federal stay in each case should, however, be granted only on the condition that issues relating to the validity of the regulation, which are foreclosed from litigation in the federal courts by section 307(b)(2)³⁴⁴ of the statute, not be raised in the state proceedings. To the extent that section 307(b)(2) does not foreclose attacks on the validity of federally approved regulations in the state proceedings,³⁴⁵ that state law does not prevent such challenges, and that the EPA is required to establish substitute regula-

³⁴⁰ U.S. Steel Corp. v. Fri, 364 F. Supp. 1013, 1021 (N.D. Ind. 1973).

³⁴¹ U.S. v. Interlake, Inc., 429 F. Supp. 193 (N.D. Ill. 1977). In that case the defendant's coke ovens violated both the federally approved emission limitation and the federally promulgated compliance schedule. Suit was brought by the federal government for injunctive relief with jurisdiction based on 42 U.S.C. § 1857c-8(b)(2) (Supp. V 1975) (current version at 42 U.S.C.A. § 7413(b)(2) (West Supp. 1978) and 28 U.S.C. § 1345 (1976)). The EPA and the state differed with respect to the appropriate means to comply with the regulation.

³⁴² 429 F. Supp. at 193.

³⁴³ Circumstances in which a federal court can properly abstain or otherwise defer to contemporaneous state court proceedings are described in Colorado River Water Conservation Dist. v. United States, 424 U.S. 800, 813-19 (1976). The change in the statutory language (discussed at note 350 *infra*) making EPA commencement of civil enforcement actions against major noncomplying sources mandatory would not appear to effect the authority of the court to abstain from proceeding where there is simultaneous state-federal enforcement.

³⁴⁴ 42 U.S.C.A. § 7607(b)(2) (West Supp. 1978) (which forecloses from judicial review in federal enforcement proceedings issues which could have been raised in the courts of appeals following EPA plan approval). The issues thus foreclosed include not only issues of constitutional law and federal law, but also issues relating to the validity of the regulations under state law. See *Luneburg & Roselle*, *supra* note 52, at 681-88. The court in *Interlake* did not, however, believe that the precise constitutional issue presented there (vagueness) was foreclosed by § 307. 429 F. Supp. at 193.

³⁴⁵ That provision protects from subsequent judicial review "action of the Administrator," that is, the federal rulemaking. It does not explicitly apply to state action in adopting the regulations.

tions for those found invalid by state authorities,³⁴⁶ abstention without such a condition could result in substantial delays in effecting emission abatement, not only by the source involved in the case at hand, but also by all other sources subject to the regulation.³⁴⁷ In cases where abstention is justified, failure of the state agency or court to proceed expeditiously with the enforcement action should, of course, result in resumption of enforcement in the federal court.³⁴⁸

While the potential for confusion and delay inherent in the dualistic enforcement system cannot be overlooked, the desirability of, as well as the prospect for, change in the direction of exclusive federal or state authority in this area is doubtful.³⁴⁹ In 1977 Congress did not basically disturb the existing relationship.³⁵⁰ The reasons against such a change are similar to those militating against vesting exclusive responsibility for the plan formulation process in one governmental level. On the one hand, there is a lack of federal resources to investigate, issue appropriate orders to, and monitor compliance by all the sources subject to the regulations;³⁵¹ on the

³⁴⁶ See text accompanying notes 30-31 *supra*.

³⁴⁷ To the extent that the courts accept the EPA's position that state court invalidation requires state or EPA action to reestablish a federally enforceable plan, the refusal to abstain does not prevent such delays from arising, if not as a result of the case before the federal enforcement court, then as a consequence of other cases in state courts.

³⁴⁸ When abstention is appropriate, the state's interpretation of its federally approved regulation would be binding on the federal government to the extent it would not prevent attainment or maintenance of the national ambient standards. See *Wisconsin's Environmental Decade, Inc. v. Wisconsin Power & Light Co.*, 395 F. Supp. 313, 323 (W.D. Wis. 1975). Where the state interpretation would interfere with attainment or maintenance of the standards, the federal court has the right to adopt a reasonable, alternative interpretation of the regulations that would not so interfere. See *Lunenburg*, *supra* note 9, at 641-46.

³⁴⁹ Cf. *Kramer, The 1970 Clean Air Amendments: Federalism in Action or Inaction*, 6 TEX. TECH. L. REV. 47, 103 (1974) (concluding that dualistic system works well). Proposals for change have not, however, been lacking. See, e.g., *1974 Oversight Hearings (I)*, *supra* note 176, at 197 (colloquy between Sen. Buckley and Fred Tucker of National Steel Corp. regarding the desirability of the federal government's setting the emission standards and the local governments' enforcing them); *id.* at 224-25 (statement of American Iron & Steel Institute suggesting that EPA enforce state plan only when the state is not adequately enforcing it or when asked to do so by the governor of the state).

³⁵⁰ See Clean Air Amendments, §§ 111, 112, 42 U.S.C.A. § 7413 (West Supp. 1978).

One principal change, however, is that, once EPA has issued a notice of violation to a major source, it no longer has the discretion whether to follow up on it with a suit for injunctive relief. It must sue either for injunctive relief or to recover civil penalties, or both. Compare 42 U.S.C. § 1857c-8(b) (Supp. V 1975) (discretionary language of "may" used) with Clean Air Amendments, § 111(b)(1), 42 U.S.C.A. § 7413 (West Supp. 1978) (mandatory language of "shall" used). See also 1977 CONFERENCE REPORT, *supra* note 101, at 132. It is unclear whether the EPA must continue with its enforcement action against a major source after it has issued a notice of violation if the state is adequately proceeding with its own enforcement action.

³⁵¹ See text accompanying notes 38-43. The EPA has estimated that 200,000 minor

other hand, pressures by local interests can weaken or destroy abatement efforts by states or local governments. More in the way of administrative coordination and cooperation might, however, eliminate some of the problems heretofore encountered.

Other Recent Legislative Changes

The 1977 Amendments provide explicit legislative authority for the practice previously pursued by the EPA of issuing enforcement orders containing compliance schedules stretching beyond the dates originally set in the implementation plans for attainment of the ambient air quality standards.³⁵² Such orders may now also be issued by the states. The EPA's supervision of state enforcement has, however, been institutionalized to a significant extent. In the case of major sources,³⁵³ the EPA must find that any such state-issued delayed compliance order meets the requirements of the statute before the order can become effective.³⁵⁴ Orders to minor sources become effective without prior EPA concurrence but cease to be effective upon the EPA's finding that the order violates the statutory criteria.³⁵⁵ If the EPA objects to a state order, it must issue its own delayed compliance order to the source or an order pursuant to section 113(a) of the statute.³⁵⁶ The state may later issue an order to a source subject to a federal delayed-compliance schedule where the state order contains a more stringent emission limitation, a more ex-

sources (that is, those emitting less than 100 tons of a pollutant each year) may be subject to state implementation plans and that large numbers of those, perhaps 130,000, may be violating the regulations contained therein. SENATE PROGRESS REPORT, *supra* note 240, at 78-79; 1975 EPA PROGRESS REPORT—SECOND HALF, *supra* note 267, at 54.

³⁵² Clean Air Amendments, § 112(a), 42 U.S.C.A. § 7413(d) (West Supp. 1978).

³⁵³ A major source is an emitter, or one having the potential to emit, 100 tons or more of pollutant annually.

³⁵⁴ Clean Air Amendments, § 112(a), 42 U.S.C.A. § 7413(d)(2) (West Supp. 1978). The applicable requirements include public notice of the proposed issuance of the order and opportunity for a public hearing on the draft order, an incremental schedule for coming into final compliance, interim control measures, compliance as expeditiously as practicable with the applicable emission limitations, and notice of liability for noncompliance penalties. Final compliance can be delayed not later than July 1, 1979, or three years after the date for final compliance specified in the implementation plan, whichever is later. 42 U.S.C.A. § 7413(d)(1) (West Supp. 1978).

³⁵⁵ 42 U.S.C.A. § 7413(d)(2) (West Supp. 1978).

³⁵⁶ *Id.* Orders issued pursuant to § 113(a) must require compliance in a reasonable time but prior to the attainment dates for the air quality standards if those dates have not passed or, if they have passed, immediate compliance. Clean Air Amendments, § 108(g), 42 U.S.C.A. § 7410(i) (West Supp. 1978); 1977 HOUSE REPORT, *supra* note 10, at 56 n.2.

Similarly, if a state fails to issue any order to a source, EPA may proceed to issue a delayed-compliance order to the source or proceed to enforce the plan against the source pursuant to § 113(a). 42 U.S.C.A. § 7413(a)(1), (d)(1) (West Supp. 1978).

peditious timetable for compliance than that contained in the EPA order, or both.³⁵⁷ Any delayed-compliance order must be terminated if the EPA determines that the inability of the source to meet the applicable plan requirements no longer exists.³⁵⁸ If a source violates a delayed-compliance order, whether the order is issued by the EPA or by the state, the EPA is directed to take appropriate enforcement action against it.³⁵⁹ Orders issued by the state which have become effective, as well as EPA action thereon, are reviewable in the United States courts of appeals.³⁶⁰

In addition, both the EPA and the states are authorized to assess and collect noncompliance penalties against major sources.³⁶¹ The EPA can act, however, only where the state does not have a delegation of authority under section 120 or, even though it has such a delegation, where the state fails to assess a penalty in accordance with the statutory requirements.³⁶² The EPA may on its own motion review state-imposed penalties for compliance with its guidelines regarding appropriate size of penalties and must review the state's action upon petition by the affected source.³⁶³ If the EPA objects to a state penalty, it must establish a substitute penalty for the facility.³⁶⁴ State assessment of penalties and EPA objections thereto, as well as EPA orders assessing penalties, may be appealed to the United States courts of appeals.³⁶⁵

CONCLUSION

Many of the problems that have arisen in connection with the Clean Air Act since 1970 are clearly not traceable to the intergovern-

³⁵⁷ Clean Air Amendments, § 112(a), 42 U.S.C.A. § 7413(d)(2) (West Supp. 1978).

³⁵⁸ *Id.*, 42 U.S.C.A. § 7413(d)(8) (West Supp. 1978).

³⁵⁹ *Id.*, 42 U.S.C.A. § 7413(d)(9) (West Supp. 1978).

³⁶⁰ *Id.*, 42 U.S.C.A. § 7413(d)(11) (West Supp. 1978); *id.* § 305(c), 42 U.S.C.A. § 7607 (West Supp. 1978). EPA action in issuing a delayed-compliance order is similarly reviewable in the United States courts of appeals. *Id.* Presumably the state courts have concurrent jurisdiction to review state-issued orders. *Cf.* *Claffin v. Houseman*, 93 U.S. 130, 136 (1876) ("[W]here jurisdiction may be conferred on the United States courts, it may be made exclusive where not so by the Constitution itself; but, if exclusive jurisdiction be neither express nor implied, the State Courts have concurrent jurisdiction whenever, by their own constitution, they are competent to take it."). This, of course, raises the possibility of delays similar to those encountered in connection with the implementation plan formulation process and described in text accompanying notes 29-34 *supra*.

³⁶¹ Clean Air Amendments, § 118, 42 U.S.C.A. § 7420 (West Supp. 1978). For further discussion of these provisions, see text accompanying notes 157-61 *supra*.

³⁶² 42 U.S.C.A. § 7420(b)(2) (West Supp. 1978).

³⁶³ *Id.* § 7420(b).

³⁶⁴ *Id.*

³⁶⁵ *Id.* § 7420(e); *id.* § 7607(b)(1). See also 1977 CONFERENCE REPORT, *supra* note 101, at

mental structures chosen by Congress to achieve its air quality goals. Nor are they attributable to administrative practices which have their origin, to some degree, in the attempt to involve national, state, and local governments in the crusade for clean air. The elevation of air quality as the one overriding criterion for policymaking,³⁶⁶ the expedited and inflexible time schedule laid down for taking action,³⁶⁷ lack of adequate scientific data and technical experience in various areas,³⁶⁸ among other factors, have contributed to the creation of friction, delay, waste, and confusion in air pollution control since 1970. They have also magnified the defects inherent in the bi-level, now tri-level, governmental approach.

Furthermore, while it may be justifiable, to some extent, to point an accusing finger at the intergovernmental scheme chosen by Congress, alternatives to the type of federal, state, and local partnership established in 1970 and elaborated in 1977 that can work equally well in practice as in theory are unlikely to become available in the foreseeable future.³⁶⁹ One approach is that state and local governments be given exclusive responsibility to formulate and enforce control measures in accordance with their unique needs and circumstances, without federal oversight or restrictions. In that way, certain diseconomies might be avoided. The EPA would be left with the task of providing the scientific and technical information

140. Concurrent jurisdiction in the state courts to review state-imposed penalties is an open question here, as in the case of review of state-issued delayed-compliance orders. See note 360 *supra*.

³⁶⁶ See, e.g., G. HAGEVIK, D. MANDELKER, & R. BRAIL, *supra* note 86, at 34 (noting that a program based on attainment of a single environmental objective is ill-suited to the exercise of land-use powers, which ordinarily are directed to a multiplicity of developmental and environmental goals).

³⁶⁷ See text accompanying note 20 *supra*. See also Rihm, *supra* note 236, at 838-39 (complaining of federally mandated crash programs); Stern, *supra* note 176, at 1021; URBAN LAWYER Comment, *supra* note 91, at 23. To some extent, the tight time schedule contributed to the severity of some of the transportation plans. See, e.g., 38 Fed. Reg. 30,972 (1973) (EPA promulgation of an inspection and maintenance plan for the Cincinnati Interstate Air Quality Control Region where ambient standards would not be attained by 1975, though they might have been attained, without the federal controls, within several years thereafter on the basis of the federal emission standards for new cars and certain bridge improvements). The short time frame for attainment required, in some cases, the consideration of short term, ad hoc measures. See, e.g., *Controls Hearings (III)*, *supra* note 39, at 36 (New York could not rely on mass transit improvements to attain the standards because of the lead-time necessary to implement them).

³⁶⁸ See text accompanying note 247 *supra*; 1977 SENATE REPORT, *supra* note 93, at 23-24 (lack of knowledge regarding transportation control strategy alternatives); *Controls Hearings (III)*, *supra* note 39, at 181 (disagreement between EPA and Texas regarding evaluation of the oxidant problem in that state).

³⁶⁹ C. JONES, note 15 *supra*, Currie, note 12 *supra*, Hassett, note 15 *supra*, and Zerbe, note 15 *supra*, make various proposals for change.

required for the development of such regulations.³⁷⁰ From prior experience, however, it would appear that interstate competition for industry and cross-boundary pollution, among other factors, would, under such a scheme, defeat efforts for expeditious abatement of pollution and maintenance of currently clean air in many areas.³⁷¹ Long-range transport of pollutants, which has been revealed by recent research, may in fact eventually require more in the way of centrally directed planning than currently exists.³⁷²

The present allocation of responsibilities among the levels of government has worked reasonably well.³⁷³ Congress's efforts to expand the role of local government,³⁷⁴ whose involvement particularly in the transportation control area is essential if widespread public support is to be realized,³⁷⁵ should assist the existing structure in functioning better in the future.

This is not to say that the system could not or should not be improved or that substantial problems do not lie ahead. Various suggestions for change have been made during the course of the foregoing discussion. Moreover, there will be formidable difficulties encountered in coordinating federal, state, and local programs, which have policy orientations other than air pollution abatement, so that they do not work at cross-purposes with the requirements of

³⁷⁰ See, e.g., Zerbe, *supra* note 15, at 242.

³⁷¹ See text accompanying notes 181-82 *supra*; 1977 HOUSE REPORT, *supra* note 10, at 133; Hines, *supra* note 10, at 699-700. On the other hand, Zerbe, *supra* note 15, at 201-07, argues that, even in view of such factors, "economically correct" standards will be set without extensive federal intervention. Economists are not, however, in agreement on the issue as to which level of government should set environmental standards. Compare Stein, *The 1971 Report of the President's Council of Economic Advisors: Micro-Economic Aspects of Public Policy*, 61 AM. ECON. REV. 531 (1971), with Peltzman & Tideman, *Local Versus National Pollution Control: Note*, 62 AM. ECON. REV. 959 (1972).

³⁷² See text accompanying note 233 *supra*.

³⁷³ See also 1974 Oversight Hearings (I), *supra* note 176, at 280 (statement of William R. Adams, Commissioner, Maine Department of Environmental Protection, noting that, without the 1970 Act, the progress in air pollution abatement experienced in Maine and other states would have occurred much more slowly); Coggins, *Regulation of Air and Water Quality in Kansas: A Critical Look at Legislative Ambiguity and Administrative Discretion*, 21 U. KAN. L. REV. 1 (1972) (concluding that progress in air pollution control in Kansas was due largely to federal "stick and carrot"); Sterling, *supra* note 82, at 841-43. Cf. J. QUARLES, *supra* note 39, at 227 (noting that the Act resulted in creating state agencies with better staff, stronger legal authority, and more sophisticated information systems). But for a generally critical commentary of the experience under the Act for the first few years after 1970, see C. JONES, note 15 *supra*.

³⁷⁴ See text accompanying notes 92-126 *supra*.

³⁷⁵ Cf. 1977 SENATE REPORT, *supra* note 93, at 38 (noting that a major problem in developing and enforcing transportation control plans had been the lack of local involvement in the process).

the 1977 Clean Air Act Amendments.³⁷⁶ The fragmentation of governmental responsibility at the substate level³⁷⁷ will not disappear overnight as a serious roadblock hindering effective and efficient control efforts. Since the 1977 Amendments retain the goal of attainment of designated levels of air quality by dates certain,³⁷⁸ discontent among state and local governments regarding the restrictions thus imposed on their planning will continue.³⁷⁹ Federal promulgation of transportation control measures remains a statutory and probably necessary cure for state inaction, though it is of dubious effectiveness given the difficulty of generating strong local support for measures imposed from above that have substantial effects on lifestyles.³⁸⁰ The failure of Congress and the states to provide adequate funding for control programs, including the construction and improvement of mass transit facilities, would doom efforts to make the 1977 Amendments more accomplishment than rhetoric.³⁸¹ Finally, the technical complexity of the 1977 Amendments not only

³⁷⁶ Such problems plagued implementation of the 1970 Amendments. *See, e.g., 1970 Amendments Hearings (I)*, *supra* note 79, at 260-62 (lack of coordination between EPA and DOT regarding dealing with air quality effect of highways); R. SANSOM, *supra* note 39, at 168-69 (noting lack of DOT support for EPA transportation control plans).

Legislative attempts to bring coordination about have included 16 U.S.C. § 1456(f)(1976) (coastal zone management plans must be consistent with Clean Air Act requirements); 23 U.S.C. § 109(j) (1976) (federal-aid highways must be consistent with state implementation plans); 24 C.F.R. § 600.651(a)(1)-651(a)(4) (1977) (HUD-funded comprehensive planning activities must incorporate implementation plan requirements). In 1977, Congress directed that federal government activities be consistent with the air pollution control requirements under the Clean Air Act and that federal agencies disbursing grants with air quality related transportation consequences give priority to projects assisting in abatement of air pollution. Clean Air Amendments, § 129(b), 42 U.S.C.A. § 7506(c) (West Supp. 1978).

³⁷⁷ *See* G. HAGEVIK, D. MANDELKER, & R. BRAIL, *supra* note 86, at 29; authorities cited in note 90 *supra*.

It is questionable whether many of the institutional problems that plagued design and implementation of transportation control plans have been solved. These are discussed at great length at *Controls Hearings (III)*, *supra* note 39, at 667-753 (differing policy goals of agencies that must devise plans, large number of organizations that must be involved, and problems of interstate cooperation).

³⁷⁸ *See, e.g.,* Clean Air Amendments, § 129(b), 42 U.S.C.A. § 7502 (West Supp. 1978). Primary standards for other than automobile-related pollutants must be achieved no later than 1982, and all ambient standards must be attained by 1987.

³⁷⁹ For their reaction to similar provisions of the 1970 Amendments, *see 1974 Budget Hearings*, *supra* note 82, at 58 (National League of Cities emphasized that local government must be able to weigh all costs and benefits of pollution reduction strategies along with local plans and priorities).

³⁸⁰ *See* text accompanying note 73 *supra*.

³⁸¹ *See* text accompanying note 274 *supra*. As of April, 1978, the Carter Administration was not asking that all of the \$75 million be appropriated for local transportation planning required by the 1977 Amendments, which failure deeply disturbed both state and local officials. *See* [1978] 8 ENVIR. REP. (BNA) (Current Developments) 1870, 1995; 9 *id.* 15.

significantly narrows the area where state discretion can operate,³⁸² it may also result in more, rather than less, federal involvement in the regulatory process to the extent that states cannot take the actions required by the statute because of the lack of necessary expertise. At the least, the detail, as well as the ambiguity, of the statute as amended makes future friction and confusion among federal, state, and local agencies inevitable.³⁸³

³⁸² See text accompanying notes 201-04 *supra*.

³⁸³ Letter from David Kee (U.S. Environmental Protection Agency, Region V) to author (Oct. 1, 1977).

FEDERAL ENFORCEMENT PROCEEDINGS UNDER THE 1977 CLEAN WATER ACT†

SANFORD L. HARTMAN

I. INTRODUCTION

At the close of the first session of the 95th Congress, the Legislature passed, and the President signed,¹ the Clean Water Act of 1977,² which amended the Federal Water Pollution Control Act.³ The amendments were characterized by President Carter as nothing more than a "mid-course correction,"⁴ made necessary by unexpected difficulties in enforcing interim deadlines which had been imposed to satisfy the Act's ultimate aim of ending discharges of pollutants into all navigable waters.⁵ The purpose of this comment is to examine the significance of this legislation⁶ in light of the enforcement difficulties which arose under the Act prior to the amendments⁷ to determine whether they will in fact prevent such problems from arising in the future, and to question whether Congress acted effectively in enacting these provisions.

II. THE STRUCTURE, THEORY, AND FAILURE OF THE ACT

The Federal Water Pollution Control Act, as enacted in 1972, prohibits any person from discharging any pollutant except when the discharge is in compliance with other provisions of the Act.⁸ In order to avoid the severe economic dislocation that would result from an immediate

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1. 13 WEEKLY COMP. OF PRES. DOC. 1933 (Jan. 2, 1978).

2. Pub. L. No. 95-217, 91 Stat. 1566 [hereinafter referred to as the amendments or the Clean Water Act].

3. 33 U.S.C. §§ 1251-1376 (Supp. V 1975), as amended by Clean Water Act of 1977, Pub. L. No. 95-217, 91 Stat. 1566 [hereinafter referred to as the Act].

4. 13 WEEKLY COMP. OF PRES. DOC. 1933 (Jan. 2, 1978).

5. 33 U.S.C. § 1251 (Supp. V 1975).

6. See note 51 *infra*.

7. Among the most significant enforcement difficulties with the Act was the failure of Congress to allocate funding necessary for municipalities to comply with the requirements of the Act. Furthermore, the requirements imposed on industrial polluters proved to be economically and technologically infeasible within the strict time limits imposed by the Act.

8. Section 301(a) of the Act, 33 U.S.C. § 1311(a) (Supp. V 1975), states: "Except as in compliance with this section and sections 1312, 1316, 1317, 1328, 1342, and 1344 of this title, the discharge of any pollutant by any person shall be unlawful." The Federal Water Pollution Control Act marked a significant change in the federal government's strategy of ending discharges into the nation's navigable waters. Under the older strategy, water quality standards for a given body of water were established, and all dischargers were collectively responsible for insuring that the water quality did not fall below this minimum level. Water Quality Act of 1965, Pub. L. No. 89-234, 79 Stat. 903 (amended 1966, 1972, 1977). Enforcement

and total cessation of all discharging,⁹ the Act includes a series of compliance deadlines by which the discharge of any pollutant¹⁰ was to become increasingly more restricted. In addition, the Act includes a complex regulatory process through which the discharger would be monitored, and enforcement action could be taken, if needed, to insure compliance with the law.¹¹

The compliance deadlines are a major facet of the Act. Pursuant to section 304(b)(1)(A),¹² the Administrator of the Environmental Protection Agency¹³ was to promulgate regulations with respect to effluent limitations¹⁴ for classes and categories of industries¹⁵ by October 18, 1972. These limitations would define the standard of "best practicable control technology currently available."¹⁶ To establish this interim standard, the

agencies, therefore, had to determine whether the quality of a body of water was below that required by law. The agencies then had to determine which dischargers were responsible for the violation. Finally, they would order abatement of the discharge. Under the present law, enforcement efforts begin by determining the appropriate level of discharge by each permit holder. Any violation of these limits is, a fortiori, unlawful. *EPA v. State Water Resources Control Bd.*, 426 U.S. 200, 204-05 (1976).

9. *American Frozen Food Inst. v. Train*, 539 F.2d 107, 116 (D.C. Cir. 1976) (upholding in all but one respect effluent guidelines established for the potato processing industry).

10. Pollutant is defined in 33 U.S.C. §1362(6) (Supp. V 1975), which, in pertinent part, states: "The term 'pollutant' means dredged spoil, solid waste, incinerator residue, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand, cellar dirt and industrial, municipal, and agricultural waste discharged into water."

11. Federal Water Pollution Control Act, Pub. L. No. 92-500, §309, 86 Stat. 858 (1973) (current version at 33 U.S.C. §1319 (Supp. V 1975)), as amended by Clean Water Act of 1977, Pub. L. No. 95-217, §§55-56, 91 Stat. 1591. See notes 40-44 *infra* and accompanying text.

12. 33 U.S.C. §1314(b)(1)(A) (Supp. V 1975). This provision states:

For the purpose of adopting or revising effluent limitations under this chapter the Administrator shall, after consultation with appropriate Federal and State agencies and other interested persons, published within one year of October 18, 1972, regulations, providing guidelines for effluent limitations and, at least annually thereafter, revise, if appropriate, such regulations. Such regulations shall—

(1)(A) identify, in terms of amounts of constituents and chemical, physical, and biological characteristics of pollutants, the degree of effluent reduction attainable through the application of the best practicable control technology currently available for classes and categories of point sources (other than publicly owned treatment works);

Id.

13. [Hereinafter referred to as the EPA or Agency]. The Administrator of the EPA was authorized, in §101(d), 33 U.S.C. §1251(d) (Supp. V 1975), to administer the Act.

14. Effluent limitation is defined in 33 U.S.C. §1362(11) (Supp. V 1975), which states that "[t]he term 'effluent limitation' means any restriction established by a State or the Administrator on quantities, rates, and concentrations of chemical, physical, biological, and other constituents which are discharged from point sources into navigable waters, the waters of the contiguous zone, or the ocean, including schedules of compliance."

15. Classes and categories are groupings of similar industries compiled by the Administrator. Such classes and categories include textile mills, fabricated metal producers, paper mills, and electric power plants. See note 47 *infra* for a more extensive list of established classes and categories.

16. 33 U.S.C. §1314(b)(1)(B) (Supp. V 1975). This provision states:

For the purpose of adopting or revising effluent limitations under this chapter the Administrator shall, after consultation with appropriate Federal

Administrator was required to perform a cost-benefit analysis to insure that the expenditures for abatement devices were justified by the degree of effluent reduction achieved by their installation.¹⁷ In addition, the Administrator was to take into account the age of the facilities as well as the engineering considerations involved in the installation of the equipment.¹⁸ Most industrial dischargers were to achieve compliance with this standard on or before July 1, 1977.¹⁹ Section 304(b)(2)(A) of the Act²⁰ further required the Administrator to promulgate regulations delineating the 1983 standard of "best available technology economically achievable" for those

and State agencies and other interested persons, publish within one year of October 18, 1972, regulations, providing guidelines for effluent limitations and, at least annually thereafter, revise, if appropriate, such regulations. Such regulations shall . . .

(B) specify factors to be taken into account in determining the control measures and practices to be applicable to point sources (other than publicly owned treatment works) within such categories or classes. Factors relating to the assessment of best practicable control technology currently available to comply with subsection (b)(1) of section 1311 of this title shall include consideration of the total cost of application of technology in relation to the effluent reduction benefits to be achieved from such application, and shall also take into account the age of equipment and facilities involved, the process employed, the engineering aspects of the application of various types of control techniques, process changes, non-water quality environmental impact (including energy requirements), and such other factors as the Administrator deems appropriate.

Id.

17. *Id.*

18. *American Iron and Steel Inst. v. EPA*, 526 F.2d 1027 (3d Cir. 1975), provided an explanation of what the 1977 standards were to include. The court faced an allegation by the American Iron and Steel Institute that regulations promulgated by the Administrator did not comply with the Act. It concluded that § 301 of the Federal Water Pollution Control Act, Pub. L. No. 92-500, 86 Stat. 844 (1973) (current version at 33 U.S.C. § 1311 (Supp. V 1975)), as amended by Clean Water Act of 1977, Pub. L. No. 95-217, §§ 42-47, 91 Stat. 1583, required the Administrator to establish the maximum amounts of discharge permissible under the Act for various classes of industry. Section 304 of the Federal Water Pollution Control Act prior to its amendment was then relevant when these guidelines were applied to specific discharges. Thus, when the Administrator granted the discharger a permit, he was to consider the age of the plant, the engineering aspects of abatement equipment, nonwater quality impact including energy requirements, and the costs of such equipment. 526 F.2d at 1045-55.

19. 33 U.S.C. § 1311(b)(1)(A) (Supp. V 1975) provides:

In order to carry out the objective of this chapter there shall be achieved—

(1)(A) not later than July 1, 1977, effluent limitations for point sources, other than publicly owned treatment works, (I) which shall require the application of the best practicable control technology currently available as defined by the Administrator pursuant to section 1314(b) of this title, or (II) in the case of a discharge into a publicly owned treatment works which meets the requirements of subparagraph (B) of this paragraph, which shall require compliance with any applicable pretreatment requirements and any requirements under section 1317 of this title;

If an industrial discharger falls within § 307 of the Act, 33 U.S.C. § 1317 (Supp. V 1975), as amended by Clean Water Act of 1977, Pub. L. No. 95-217, § 53, 91 Stat. 1589, which deals with toxic substances, separate compliance standards are imposed. This provision states that every industrial point source discharging effluent considered by the Administrator to be toxic must comply with much more strict standards than the 1977 technology requirements.

20. 33 U.S.C. § 1314(b)(2)(A) (Supp. V 1975).

same classes and categories of industries.²¹ This was a much more rigorous standard than the 1977 technology and did not include any formal cost-benefit analysis. Thus, the Administrator could have imposed standards that he found to be economically and technologically achievable, regardless of the age and condition of existing facilities.²² Dischargers falling within this provision were expected to comply with it on or before July 1, 1983.²³

A similar two-stage compliance process was established for publicly owned treatment plants.²⁴ Section 304(d)(1) of the Act²⁵ stated that the

21. Section 304(b)(2)(A) of the Act sets forth the factors to be considered in promulgating these regulations:

(b) For the purpose of adopting or revising effluent limitations under this chapter the Administrator shall, after consultation with appropriate Federal and State agencies and other interested persons, published within one year of October 18, 1972, regulations, providing guidelines for effluent limitations and, at least annually thereafter, revise, if appropriate, such regulations. Such regulations shall . . .

(2)(A) identify, in terms of amounts of constituents and chemical, physical, and biological characteristics of pollutants, the degree of effluent reduction attainable through the application of the best control measures and practices achievable including treatment techniques, process and procedure innovations, operating methods, and other alternatives for classes and categories of point sources (other than publicly owned treatment works);

33 U.S.C. § 1314(b)(2)(A) (Supp. V 1975).

22. The 1983 standards were to be essentially the same as the 1977 standards except that cost was to play a much more limited role. In contrast to the 1977 requirements, so long as the standards did not impose an unreasonable burden, they were within the framework of the Act. The closing of plants unable to afford the cost of compliance was specifically considered by Congress to be part of the price for clean water. *American Iron and Steel Inst. v. EPA*, 526 F.2d 1027, 1051-52 (3d Cir. 1975).

23. Section 301 (b)(2)(A)(i) of the Federal Water Pollution Control Act, Pub. L. No. 92-500, 86 Stat. 844 (1973) (current version at 33 U.S.C. § 1311 (Supp. V 1975)), as amended by Clean Water Act of 1977, Pub. L. No. 95-217, § 42, 91 Stat. 1582, states:

[N]ot later than July 1, 1983, effluent limitations for categories and classes of point sources, other than publicly owned treatment works, which

(1) shall require application of the best available technology economically achievable for such category or class, which will result in reasonable further progress toward the national goal of eliminating the discharge of all pollutants, as determined in accordance with regulations issued by the Administrator pursuant to section 1314(b)(2) of this title, which such effluent limitations shall require the elimination of discharges of all pollutants if the Administrator finds, on the basis of information available to him (including information developed pursuant to section 1325 of this title), that such elimination is technologically and economically achievable for a category or class of point sources as determined in accordance with regulations issued by the Administrator pursuant to section 1314(b)(2) of this title.

24. Publicly owned treatment works and industrial polluters are not the only dischargers regulated under the Act. Section 306(b)(1)(B) of the Act, 33 U.S.C. § 1316(b)(1)(B) (Supp. V 1975), requires the Administrator to promulgate relevant standards for new sources. New sources are defined as sources whose construction began after the regulations issued pursuant to this section were announced.

25. 33 U.S.C. § 1314(d)(1) (Supp. V 1975). This provision states:

The Administrator, after consultation with appropriate Federal and State agencies and other interested persons, shall publish within sixty days after October 18, 1972 (and from time to time thereafter) information, in terms of amounts of constituents and chemical, physical, and biological characteristics of pollutants, on the degree of effluent reduction attainable through the application of secondary treatment.

Administrator was required to publish information setting forth the amount of discharge reduction which could be achieved by the application of secondary treatment. This interim standard, much like the 1977 technology with respect to industry, was more clearly defined in Agency regulations.²⁶ Publicly owned treatment plants were required to comply with this standard by July 1, 1977.²⁷ In addition, all such point sources²⁸ were to achieve the best practical waste treatment technology²⁹ by July 1, 1983.³⁰

The increasingly stringent standards reflect the theoretical underpinnings of the Act. The legislative history clearly indicates that it was to be technology-forcing. By gradually mandating more and more limited discharge levels, Congress expected to force the development of the technology necessary to achieve the goal of no discharges by 1985.³¹ This need to

26. 40 C.F.R. §§ 133.100-104 (1977) sets forth "Secondary Treatment Information." Specifically, § 133.102 delineates the minimum level of effluent quality which must be attained in terms of parameters for biochemical oxygen demand, suspended solids, fecal coliform, bacteria, and pH level. The regulations also outline relevant sampling and testing procedures. *Id.* § 133.104.

27. Section 301(b)(1)(B) of the Act, 33 U.S.C. § 1311(b)(1)(B) (Supp. V 1975), states:

In order to carry out the objective of this chapter there shall be achieved—

(1)(B) for publicly owned treatment works in existence on July 1, 1977, or approved pursuant to section 1283 of this title prior to June 30, 1974 (for which construction must be completed within four years of approval), effluent limitations based upon secondary treatment as defined by the Administrator pursuant to section 1314(d)(1) of this title

28. Section 502(14) of the Act, 33 U.S.C. § 1362(14) (Supp. V 1975), defines "point source," as: "any discernible, confined and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, or vessel or other floating craft, from which pollutants are or may be discharged." For the purposes of this comment, the terms point source and discharger will be used interchangeably, although one discharger may have several point sources. For example, a steel mill may be considered one discharger, although it would have several point sources which have imposed on them various effluent limitations since the limits are imposed on a point source by point source basis. Thus, the Act established a regulatory system in which compliance is based upon each point source achieving the established effluent limitation rather than each discharger, as a unit, complying with the Act.

29. Section 201(g)(2)(A) of the Act, 33 U.S.C. § 1281(g)(2)(A) (Supp. V 1975), states:

(g)(2) The Administrator shall not make grants from funds authorized for any fiscal year beginning after June 30, 1974, to any State, municipality, or Intermunicipal or Interstate agency for the erection, building, acquisition, alteration, remodeling, improvement, or extension of treatment works unless the grant applicant has satisfactorily demonstrated to the Administrator that—

(A) alternative waste management techniques have been studied and evaluated and the works proposed for grant assistance will provide for the application of the best practicable waste treatment technology over the life of the works consistent with the purposes of this subchapter;

30. Section 301(b)(2)(B) of the Act, 33 U.S.C. § 1311(b)(2)(B) (Supp. V 1975), states: "In order to carry out the objective of this chapter there shall be achieved . . . not later than July 1, 1983, compliance by all publicly owned treatment works with the requirements set forth in section 1231(g)(2)(A) of this title."

31. Section 101(a)(1) of the Act, 33 U.S.C. § 1251(a)(1) (Supp. V 1975), states:

The objective of this chapter is to restore and maintain the chemical, physical, and biological integrity of the Nation's waters. In order to achieve

press for increasingly stringent limits is clearly reflected in the differences between the 1977 and 1983 requirements. The first standard was to include the average of the best existing performance of plants within each category of industry.³² However, the second standard imposed the best performance level in existence of all discharges. Furthermore, the second standard did not require the Administrator to engage in a cost-benefit analysis since it would weaken the control requirements.³³

Accordingly, Agency action with respect to the promulgation and enforcement of regulations needed to insure compliance with the Act rested primarily on two provisions: section 301 set target dates for increasingly stringent standards to be promulgated and achieved, and section 304 outlined the methodology by which the EPA was to establish the standards.³⁴ However, it was the National Pollutant Discharge Elimination System

this objective it is hereby declared that, consistent with the provisions of this chapter—

(1) it is the national goal that the discharge of pollutants into the navigable waters be eliminated by 1985.

32. S. REP. No. 414, 92d Cong., 2d Sess. 50, *reprinted in* [1972] U.S. CODE CONG. & AD. NEWS, 3668, 3716.

33. Zener, *THE FEDERAL LAW OF WATER POLLUTION CONTROL*, FEDERAL ENVIRONMENTAL LAW 683, 698. (E. Dolgin and T. Guilbert eds. 1974). Since the benefits of clean water are difficult to quantify in dollars and cents, such benefits are prone to underestimation when compared with the benefits of new jobs or increased production. *Id.* By the time the Act was enacted, Congress became aware of such results. Section 102(c) of the National Environmental Policy Act of 1969, 42 U.S.C.A. § 4332(c) (1977), required that a cost-benefit analysis be performed prior to the initiation of any "major Federal actions significantly affecting the quality of the human environment . . ." *Id.* In reviewing such a cost-benefit analysis, the Court of Appeals for the Fifth Circuit concluded that it was simply not possible to quantify, with precise accuracy, the adverse environmental impact resulting from the construction of a housing project. *Sierra Club v. Lynn*, 502 F.2d 43, 51 (5th Cir. 1974).

34. In *E. I. duPont de Nemours & Co. v. EPA*, 430 U.S. 112 (1977), the Supreme Court resolved a split among the circuits as to whether issuance of effluent guidelines is required under § 301 of the Federal Water Pollution Control Act, Pub. L. No. 92-500, 86 Stat. 844 (1973) (current version at 33 U.S.C. § 1311 (Supp. V 1975)), *as amended by* Clean Water Act of 1977, Pub. L. No. 95-217, §§ 42-47, 91 Stat. 1583, under § 304 of the Federal Water Pollution Control Act prior to its amendment, or under both. The Court concluded that § 301 constituted an independent grant of authority to the EPA under which it was required to issue regulations for classes and categories of industries. Section 304 was simply a "description of the methodology" EPA was to use in acting pursuant to the former provision. 430 U.S. at 126-30.

This view necessarily rejected that of the Eighth Circuit, which held in *CPC Int'l, Inc. v. Train*, 515 F.2d 1032 (8th Cir. 1975), that Agency-issuance of guidelines for the 1977 and 1983 deadlines was based exclusively on § 304 of the Act. The court based its conclusion, *inter alia*, on the fact that Congress used language different from that found in provisions which clearly required promulgation of regulations, did not set up a specific time frame with respect to when the relevant regulations were to be promulgated, and did not explicitly state that such administrative action was expected. *Id.* at 1038.

The significance of this controversy is found in § 509(b)(1) of the Act, 33 U.S.C. § 1369(b)(1) (Supp. V 1975), which states, in pertinent part, that "review of the Administrator's action . . . in approving or promulgating any effluent limitation [under § 301] . . . may be had . . . in the Circuit Court of Appeals . . ." Accordingly, if Agency action in setting these standards were to be based solely on § 304 of the Act, review of class and category standards would be available only when those standards were transformed into the individual obligations of the discharger by issuing it a permit under § 402 of the Federal Water Pollution Control

Permit,³⁵ issued to the individual industry or publicly owned treatment works pursuant to section 402(a)(1) of the Act,³⁶ which translated these broadly defined standards into the specific legal requirements of an individual discharger. Thus, by stating precisely what amount of discharges are permitted from each point source, it was expected that the overall levels sought by Congress would be achieved.³⁷ Although the administration of the permit program was initially handled by the EPA,³⁸ the

Act, Pub. L. No. 92-500, 86 Stat. 880 (1973) (current version at 33 U.S.C. § 1342 (Supp. V 1975)), as amended by Clean Air Act of 1977, Pub. L. No. 95-217, §§ 65-66, 91 Stat. 1599. This action is reviewable by the circuit courts under § 509(b)(i) of the Act, 33 U.S.C. § 1369(b)(F) (Supp. V 1975). Such a construction would "produce a truly perverse situation in which the Court of Appeals would review numerous individual actions issuing or denying permits pursuant to § 402 but would have no power of direct review of the basic regulations governing those individual transactions." *E. I. duPont de Nemours & Co. v. EPA*, 430 U.S. at 136.

The following jurisdictions have been delegated permit-issuing authority: California, Colorado, Connecticut, Delaware, Georgia, Hawaii, Indiana, Kansas, Maryland, Michigan, Minnesota, Mississippi, Missouri, Montana, Nebraska, Nevada, New York, North Carolina, Ohio, Oregon, South Carolina, Vermont, the Virgin Islands, Virginia, Washington, Wisconsin, and Wyoming. Permit-issuing authority in remaining jurisdictions rests with the EPA. [1977 Fed. Laws] ENVIR. REP. (BNA) 41:2301.

This joint state-federal system is a reflection of the theory, expressed in the Act, that states have a role to play in the pollution control process. Thus, Congress rejected the traditional view of state-federal jurisdiction which would have required that some waters be considered state and others federal. Zener, *supra* note 33, at 692. Instead, Congress brought all navigable waters under one system in which both levels of government cooperate in the administration of that system. *Id.* "It is expected that the States will play a major role in the administration of this program. . . . [A]fter a transition period during which the State program and capability will be upgraded, the program should be administered by those States with programs which meet the requirements of the Act." S. REP. No. 414, 92d Cong., 2d Sess. 71, reprinted in [1972] U.S. CODE CONG. & AD. NEWS 3668, 3737.

35. Hereinafter referred to as NPDES permit.

36. 33 U.S.C. § 1342(a)(1) (Supp. V 1975). This provision states:

Except as provided in sections 1328 and 1344 of this title, the Administrator may, after opportunity for public hearing, issue a permit for the discharge of any pollutant, or combination of pollutants, notwithstanding section 1311(a) of this title, upon condition that such discharge will meet either all applicable requirements under sections 1311, 1312, 1316, 1317, 1318, and 1343 of this title, or prior to the taking of necessary implementing actions relating to all such requirements, such conditions as the Administrator determines are necessary to carry out the provisions of this chapter.

37. *EPA v. State Water Resources Control Bd.*, 426 U.S. 200, 205 (1976) (federal facilities are not subject to state permit requirements in view of the structure and theory of the Federal Water Pollution Control Act).

38. The NPDES permit is a very detailed and highly technical permit which enables the EPA to monitor the discharges of every point source covered by the Act. For example, when applying for a permit, the manufacturer and commercial discharger is asked to submit information concerning the total facility intake, use, and discharge of water. Further, each individual point source is assigned a serial number, and limitations on the total discharge allowable for each is established. Thus, one discharger may have varying effluent limitations set for each point source found in his facility. Such parameters or limitations indicate the precise amount of effluent which may be discharged. By monitoring these discharges, the EPA (or state) is able to determine whether the regulated facility is complying with the technology-based standards imposed by Congress. See Application for Permit to Discharge Waste Water, Supplementary Instructions for Standard Form C—Manufacturing and Commercial, EPA Form 7550-23A (7-73). Administration of the NPDES permit program is governed by 40 C.F.R. §§ 125.1-.54 (1977). These provisions require that permits be granted following notice and public participation. *Id.* §§ 125.32-.34. Further, an adjudicatory hearing process is established by 40

Act contemplated that eventually the program would be delegated to any state which demonstrated its ability to effectively implement the program.³⁹

Enforcement procedures are set forth in section 309 of the Act.⁴⁰ Where there is a state-delegated program, and the Administrator becomes aware of any person acting in violation of the Act, he is to notify the state of the violation.⁴¹ If, after thirty days, no action is taken, the EPA can initiate federal enforcement action.⁴² In those states where the federal government retains control over the program, enforcement proceedings may be initiated as soon as the Administrator becomes aware of a violation.⁴³ In both cases, these procedures include the issuance of an order for compliance, a violation of which may result in imposition of a fine, initiation of civil proceedings in federal court, or, if the violation is willful and wanton, initiation of a criminal action.⁴⁴

C.F.R. § 125.36 (1977). The regulations also include the terms and conditions of the permits and provide for the processing of permit applications. *Id.* §§ 125.11-28.

39. Section 402 of the Federal Water Pollution Control Act, Pub. L. No. 92-500, 86 Stat. 880 (1973) (current version at 33 U.S.C. § 1342 (Supp. V 1975)), as amended by Clean Water Act of 1977, Pub. L. No. 95-217, § 53(c), 91 Stat. 1591, outlines the criteria a state must satisfy in order to be delegated responsibility for administering the program. These criteria include the submission to the EPA of a description of the program the state proposes to administer as well as a statement from the attorney general of the state that the laws of the jurisdiction provide adequate legal authority to carry out the program. They are designed to insure that the states can effectively implement § 308(a) of the Act, 33 U.S.C. § 1318(a) (Supp. V 1975), which states in pertinent part:

Whenever required to carry out the objective of this chapter, including . . .
(2) determining whether any person is in violation of any such effluent limitation . . .

(A) The Administrator shall require the owner or operator to: (i) establish and maintain such records, (ii) make such reports, (iii) install, use, and maintain such monitoring equipment or methods (including where appropriate, biological monitoring methods), (iv) sample such effluents (in accordance with such methods, at such locations, at such intervals, and in such manner as the Administrator shall prescribe), and (v) provide such other information as he may reasonably require.

Thus, all permit holders are required to submit periodic discharge monitoring reports which are then examined by the EPA or state engineers who determine whether the permit terms are being satisfied. If the permit's terms and conditions are violated, the EPA or state may then initiate enforcement proceedings.

40. Federal Water Pollution Control Act, Pub. L. No. 92-500, § 309, 86 Stat. 858 (1973) (current version at 33 U.S.C. § 1319 (Supp. V 1975)), as amended by Clean Water Act of 1977, Pub. L. No. 95-217, §§ 55-56, 91 Stat. 1591.

41. *Id.* § 309(a) (1).

42. *Id.*

43. *Id.* § 309(a) (3).

44. *Id.* § 309(d). See note 60 *infra*. In addition to the procedures explicitly outlined in § 309 of the Act, the EPA has initiated a contractor listing program pursuant to § 508 of the Act, 33 U.S.C. § 1368 (Supp. V 1975), and Exec. Order No. 11,738, 38 Fed. Reg. 28,161 (1973). Under this procedure, if a discharger has been convicted of a violation of the Act, or if it is in violation of an enforcement order issued by the EPA, it will be declared ineligible for participation in any work associated with any federal contract, grant, or loan. Before it can be listed, the discharger must be given an opportunity to present exculpatory information relating to this action and a determination must be made that the discharger is in continuing or recurring violation of the Act. Contracts of less than \$100,000.00 are exempt, and any work which is to assist in the abatement of pollution is similarly exempt. See 40 C.F.R. §§ 15.1-41 (1977).

The listing procedure received limited judicial imprimatur in *United States v. United States Steel*, 10 E.R.C. 1751 (N.D. Ill. 1977). *United States Steel* sought

At present, it is clear that a significant portion of both nonmunicipal and municipal dischargers⁴⁵ have failed to meet the July 1, 1977 deadline. Of the national total of 4,101 major nonmunicipal dischargers,⁴⁶ 633, or 16%, have failed to comply with the deadline.⁴⁷ The picture is equally discouraging with respect to publicly owned treatment plants, where approximately fifty-sixty percent are not in compliance.⁴⁸ As a result of this

a temporary restraining order to prevent the EPA from initiating the listing procedure. Noting that the process was remedial in nature and that it was based on Executive Order 11,738, the court held that the regulations promulgated to govern the procedure were a valid exercise of the Agency's authority. However, it declined to pass on the validity of the regulations insofar as due process was concerned. *Id.* at 1752.

45. For the purposes of this comment, municipal dischargers refer to publicly owned treatment plants. Nonmunicipal dischargers refer to private dischargers and are generally industries.

46. A major nonmunicipal discharger is defined by the EPA as any point source not discharging a minor quantity of pollutants. A minor discharge is defined in 40 C.F.R. § 125.1(m) (1976) as follows:

The term "minor discharge" means any discharge which (1) has a total volume of less than 50,000 gallons on every day of the year, (2) does not affect the waters of more than one State and (3) is not identified by the State water pollution control agency, the Regional Administrator, or by the Administrator in regulations issued pursuant to section 307(a) of the Act, as a discharge which is not a minor discharge. If there is more than one discharge from a facility and the sum of the volumes of all discharges from the facility exceeds 50,000 gallons on any day of the year, then no discharge from the facility is a minor discharge as defined herein.

47. [1977 Fed. Laws] ENVIR. REP. (BNA) 41:2301. This data is further broken down by the 7 regional offices of the Environmental Protection Agency as follows: *Region I*, including Maine, Massachusetts, New Hampshire, Rhode Island, Connecticut, and Vermont, 61 out of 400 (15%) not in compliance; *Region II*, including New Jersey, New York, Puerto Rico, and the Virgin Islands, 112 out of 577 (19%) not in compliance; *Region III*, including the District of Columbia, Pennsylvania, West Virginia, Delaware, Maryland, and Virginia, 102 out of 395 (26%) not in compliance; *Region IV*, including Alabama, Georgia, Florida, Kentucky, North Carolina, South Carolina, Tennessee, and Mississippi, 54 out of 1,148 (5%) not in compliance; *Region V*, including Illinois, Indiana, Michigan, Minnesota, Ohio, and Wisconsin, 132 out of 556 (24%) not in compliance; *Region VI*, including Arizona, Louisiana, New Mexico, Oklahoma, and Texas, 38 out of 353 (11%) not in compliance; *Region VII*, including Iowa, Kansas, Missouri, and Nebraska, 36 out of 174 (21%) not in compliance; *Region VIII*, including South Dakota, Utah, Colorado, Montana, North Dakota, and Wyoming, 13 out of 171 (8%) not in compliance; *Region IX*, including Samoa, Guam and Trust Territories, Alaska, California, Hawaii, and Nevada, 58 out of 122 (48%) not in compliance; and *Region X*, including Arkansas, Indiana, Oregon, and Washington, 27 out of 124 (22%) not in compliance.

The industrial categories and classes of most commonly reported violators, segregated by regions and ranked in order of the absolute number of reported violators, include: *Region I*: textiles, fabricated metals, paper products, paper mills, chemicals, and primary metals; *Region II*: electric power plants, food products, chemical products, primary metal and oil refining, oil, food, and plastics; *Region III*: blast furnaces, chemical products, electric power plants, primary metals industries, oil, food, and plastics; *Region IV*: electric power plants, chemical, textile, and food products, paper mills, stone and concrete industry, and fabricated metals; *Region V*: electric power plants, blast furnaces, paper mills, pulp mills, and chemical products; *Region VI*: chemical products, oil refineries, privately owned sewage systems, plastic materials, food metals and steel, and electric power; *Region VII*: food products, chemicals, primary metals industries, paper, steel, and machinery; *Region VIII*: electric power plants; *Region IX*: electric power plants, food products, electric and gas services, chemical products, steel, and machinery; *Region X*: pulp mills, primary metals industries, water suppliers, food products, and mining. *Id.* at 41:2304.

48. H.R. REP. No. 139, 95th Cong., 1st Sess., 15 (1977). Philadelphia, Pennsylvania is one of the major cities which is not in compliance with the 1977 deadline. Although the EPA office for Region III, which has jurisdiction over Pennsylvania,

widespread noncompliance, Congress enacted several major amendments to the Act which modify the 1977 and 1983 deadlines⁴⁹ in order to avoid difficulties enforcing an inflexible, and in many cases, unrealistic deadline.⁵⁰ However, whether the amendments will achieve this goal can be determined only by relating them to decisions interpreting the Act prior to this congressional action. Indeed, only if the issues dealt with in those cases are resolved in the amendments can the problems of enforcing these and future deadlines be resolved. Therefore, the next section of this comment contains an analysis of the 1977 amendments in light of case law interpreting the original compliance requirements.⁵¹

III. THE AMENDMENTS

The first, and possibly the most politically significant problem with the 1977 deadline involved funding for publicly owned treatment works.⁵²

has attempted to enforce this requirement, Congressman Joshua Eilberg has accused it of "refusing to support the city's efforts to solve the difficult problem of sludge disposal. . . ." 123 CONG. REC. H12,947 (daily ed. Dec. 15, 1977) (remarks of Rep. Eilberg). Indeed, on March 17, 1978, the city filed a law suit in federal court claiming that the EPA had delayed the city's efforts to construct new treatment facilities. *Philadelphia v. EPA*, No. 78-878 (E.D. Pa., filed March 17, 1978). Specifically, the city alleged that, because of changing and inconsistent Agency positions, it was unable to submit bids for necessary construction at several treatment facilities. Complaint at ¶¶ 23, 28, 38, *Philadelphia v. EPA*, No. 78-878 (E.D. Pa., filed March 17, 1978). In addition, the city alleged that the EPA failed to respond to several requests the city made which, if granted, would have extended the July 1, 1977 deadline. *Id.* ¶¶ 39-52. Accordingly, the city requested a declaration that various city sewage treatment facilities were entitled to money available under the Act, see note 55 *infra*, an extension of the deadline by which it had to meet the 1977 standards, and an injunction restraining the EPA from interfering with the city's efforts to abate water pollution. Complaint at ¶¶ 18-19.

Although the city noted that the Act was amended to allow extensions of the 1977 deadline, it did not allege that the Agency arbitrarily and capriciously denied the city's request for such an extension. Indeed, the request for the extension was made on March 15, 1978, two days before the suit was filed. *Id.* ¶¶ 50-52. As a result, in light of the failure of the EPA to take any final agency action, the chances of success on the merits are slim. See *Abbott Laboratories v. Gardner*, 387 U.S. 136, 148-49 (1967) (drug manufacturers were entitled to pre-enforcement review of regulations because the Food, Drug and Cosmetic Act, Pub. L. No. 75-717, §2 Stat. 1040 (1938), as amended by the Drug Amendments of 1962, 21 U.S.C. §§ 301-392 (1976), permitted such review and because the controversy was ripe for adjudication).

49. Clean Water Act of 1977, Pub. L. No. 95-217, 91 Stat. 1566.

50. 123 CONG. REC. H12,919 (daily ed. Dec. 15, 1977) (remarks of Rep. Roberts).

51. The scope of this comment is limited specifically to those provisions modifying the deadlines imposed for 1977 and 1983. However, there were other significant elements to the legislation. For example, there were major changes in the procedures to be used in allocating funding for publicly owned treatment plants. Clean Water Act of 1977, Pub. L. No. 95-217, §§ 12-18, 91 Stat. 1569. In addition, the standards governing toxic substances found in § 307 of the Federal Water Pollution Control Act, Pub. L. No. 92-500, 86 Stat. 856 (1973) (current version at 33 U.S.C. § 1318 (Supp. V 1975)), as amended by Clean Water Act of 1977, Pub. L. No. 95-217, § 53, 91 Stat. 1589, were significantly modified to provide for compliance with the best available technology by July 1, 1984, or three years after the standard is established, whichever is later.

52. The Federal Water Pollution Control Act, Pub. L. No. 92-500, § 207, 86 Stat. 839 (1973) (current version at 33 U.S.C. § 1287 (Supp. V 1975)), as amended by Clean Water Act of 1977, Pub. L. No. 95-217, § 30, 91 Stat. 1576, was modified to provide for additional construction grant authorizations, which may be as high as

Due to bureaucratic delay and inadequate federal funding, local municipalities lacked the financial resources necessary to enable them to achieve secondary treatment by 1977.⁵³ A case indicative of this problem is *Virginia State Water Control Board v. Train*,⁵⁴ in which plaintiff sought a declaration by the Court of Appeals for the Fourth Circuit that failure to receive federal grants authorized under title II of the Act⁵⁵ exempted publicly owned treatment works from compliance with the July 1, 1977 deadline.⁵⁶ Accordingly, the plaintiff argued that receipt of the funding, which was explicitly authorized by the Act, was a condition precedent to compliance with the Act. The court rejected the theory. Examining both the plain meaning and the legislative history of the Act, it concluded that the July 1, 1977 deadline was intended to be inflexible, and that sewage treatment plants that had not received federal funds should remain bound by the deadline.⁵⁷ In addition to the statute's failure to explicitly link funding to compliance with section 301(b)(1) of the Act, the legislative history clearly contemplated that the deadline would be inflexible.⁵⁸ Finally, the Fourth Circuit noted that Congress had rejected a provision which would have resulted in the Act being construed as the board proposed.⁵⁹ Thus, a lack of funding would not exempt the publicly owned treatment plant from meeting the July 1, 1977 deadline.

However, the court did not find the board's argument wholly without merit. The Fourth Circuit noted that should the EPA issue an enforce-

\$5 billion annually. In part, it was this financial aid which resulted in the legislation's easy passage since municipalities, facing pending enforcement of the 1977 deadlines, put pressure on Congress to allocate federal financial aid needed to install secondary treatment devices. These devices were required to satisfy the 1977 deadlines. In the House, there were only two negative votes on the legislation. 123 CONG. REC. H12,964 (daily ed. Dec. 15, 1977).

53. Congressman Roberts (Dem., Texas), for example, stated that the primary fault for delays in funding was traceable to the federal government. Not only did President Nixon impound a significant amount of funds set aside for these grants, but the EPA "put so much red tape on top of the woefully inadequate funding that many communities simply threw up their hands and refused to deal with the Federal government." 123 CONG. REC. H12,926 (daily ed. Dec. 15, 1977).

54. 559 F.2d 921 (4th Cir. 1977).

55. Section 207 of the Act, Pub. L. No. 92-500, 86 Stat. 839 (1973) (current version at 33 U.S.C. § 1287 (Supp. V 1975)), provided funding under the Act as follows:

There is authorized to be appropriated to carry out this subchapter, other than sections 1286(e), 1288 and 1289 of this title, for the fiscal year ending June 30, 1973, not to exceed \$5,000,000,000, for the fiscal year ending June 30, 1974, not to exceed \$6,000,000,000, and for the fiscal year ending June 30, 1975, not to exceed \$7,000,000,000.

56. Although \$18 billion had been appropriated for fiscal years 1973-1975, pursuant to § 207 of the Act, 33 U.S.C. § 1287 (1970), this amount proved to be inadequate to finance every treatment plant requiring such aid. Further, a significant portion of these funds had been impounded. In the case of Virginia alone, the grant money available was \$1.063 billion short of what was needed. 559 F.2d at 924 n.17.

57. 559 F.2d at 924-26.

58. The court cited the following from the Senate Report: "the deadlines established to achieve effluent limitations are strict [and] [s]ources of pollution . . . must know what the requirements are in order to proceed on schedule with their construction program." *Id.* at 925 (citation omitted). S. REP. NO. 414, 92d Cong., 2d Sess. 44, reprinted in [1972] U.S. CODE CONG. & AD. NEWS 3668, 3710.

59. 559 F.2d at 925-26.

ment order pursuant to section 309, with which the board failed to comply, the EPA would have to bring an action to enforce the terms of the order.⁶⁰ At that point, the board would be able to raise as a defense the fact that compliance was impossible without federal funding. Thus, through the exercise of its equitable powers, the court would be able to determine whether and to what extent fines and sanctions should be imposed, notwithstanding good faith efforts on the part of the municipality to comply with the order.⁶¹ This analysis, the court noted, should be done on a case-

60. Under § 309 of the Act, Pub. L. No. 92-500, 86 Stat. 858 (1973) (current version at 33 U.S.C. § 1319 (Supp. V 1975)), as amended by Clean Water Act of 1977, Pub. L. No. 95-217, §§ 55-56, 91 Stat. 1591, the Administrator is authorized to issue an order for compliance or commence a civil or criminal action. Generally, a "notice of warning" will first be sent to a discharger informing him that he is in violation of the law. If compliance is not achieved through an informal conference, then the Administrator may issue a formal order which mandates compliance within a certain period of time. Should the discharger fail to comply with the terms and conditions of the order, the EPA must then seek enforcement of that order in a United States district court. See text accompanying notes 40-44 *supra*.

61. 599 F.2d at 927. A constant theme running throughout the amendments to the Act involves a recognition on the part of Congress that despite good faith efforts, a discharger may nevertheless find it simply impossible to comply with the Act. What constitutes good faith is often a purely factual issue hinging on all the circumstances surrounding a given case. Agency memoranda and regulations are helpful in defining the term. If a discharger can demonstrate that it is impossible to satisfy the requirements of the Act for reasons which are solely beyond its control, such as inadequate funding in the case of publicly owned treatment plants or construction delays, and if it submits a schedule for achieving compliance at the earliest possible date, then the discharger is generally acting in good faith. EPA Office of Enforcement, Memorandum from Stanley LeGro to Regional Enforcement Division Directors and State NPDES Program Directors, "Questions Regarding the Policy and Procedures for Enforcement Compliance Schedule Letters," at 4 (Dec. 10, 1976); EPA Office of Enforcement, Memorandum from Stan LeGro to Regional Administrators, "Enforcement Actions Where an Industrial Discharger Fails to Meet the July 1, 1977 Statutory Deadline," 1-3 (July 3, 1976) [hereinafter referred to as *Enforcement Actions*]. Further, the Agency has, in a sense, adopted a working definition of good faith within the context of the NPDES program. The Administrator may, in his discretion, "revise or modify a schedule of compliance . . . if he determines good and valid cause (such as an act of God, strike, flood, materials shortage, or other event over which the permittee has no control) exists for such revision." 40 C.F.R. § 125.23 (1977). In addition, the EPA has the statutory authority to include a "force majeure" clause in its permits which would excuse a discharger from meeting its compliance schedule so long as the failure was caused by factors beyond its control. EPA DEC. GEN. COUN. No. 8, at 1 (April 14, 1975). There are no formal legal criteria governing the EPA's exercise of such discretion. Rather, it is solely an issue of fact to be determined through the permit modification process. EPA DEC. GEN. COUN. No. 15, at 2 (May 20, 1975). These modifications do not extend compliance of the 1977 deadline. Rather, they permit a discharger to achieve a given step in its compliance schedule later than originally anticipated. These steps generally include completion of construction plans, interim construction reports, the completion of actual construction, and the attainment of the required reduction of effluent discharges. In no case may this extend beyond the deadlines included in the Act. See note 77 *infra* and accompanying text.

In addition to this Agency memorandum, several state court decisions are significant. In *High Lake Poultry, Inc. v. Pollution Control Bd.*, 25 Ill. App. 3d 956, 323 N.E.2d 612 (1975), petitioner sought review of a penalty assessed by the board. It was undisputed that petitioner had constructed and operated waste treatment facilities without a valid permit, in violation of section 12(b) of the Illinois Environmental Protection Act, ILL. REV. STAT. ch. 111½, § 1012(b) (1973). 25 Ill. App. 3d at 957-59, 323 N.E.2d at 613. However, petitioner argued that the \$2,000.00 penalty imposed by the board was excessive in light of the fact that it had installed a type of treatment equipment which, through no fault of its own, proved to be inadequate. Further, it contended that because the state Department of Agriculture had threatened to revoke its license if it did not construct larger

by-case basis and not within the context of declaratory relief.⁶² Therefore, while a publicly owned treatment plant could not seek an exemption from the deadline on the basis of inadequate or nonexistent federal funding, it would be a factor to be taken into account when the EPA attempted to enforce a compliance order.

The 1977 amendments to the Act overrule *Virginia State Water Control Board*. First, they link compliance with secondary treatment standards to federal funding.⁶³ Thus, where the federal government fails to make funds available in time to achieve compliance, the operator of such a publicly owned treatment works may request a permit modification. Second, where it is impossible to complete necessary construction in a timely manner, permit modification is authorized. In both cases, application for these modifications must be made within 180 days following the enactment of the amendments, and the extension may not extend beyond July 1, 1983.⁶⁴ These provisions reflect Congress' conclusion that, at times, it may be impossible for a municipality to comply with the 1977 deadlines for reasons beyond its control, and that in such cases, permit adjustments are warranted.⁶⁵ However, the amendments do not deal with the dilemma posed to a municipality which does not discover that it will be receiving inadequate funding until after the 180 day permit modification period has passed. While Congress, in implementing the provisions of the Clean Water Act, continually emphasized that administrative delay and uncertainty in funding would not be tolerated,⁶⁶ it also noted that grant authori-

facilities, it had no choice but to do so even if that meant it would be unlawfully operating a treatment plant. Further, this illegal operation was caused by the failure of the board to indicate precisely what petitioner had to do to comply with the state act. Petitioner stressed its repeated and futile efforts to determine what these requirements involved. In vacating the board's decision, the court noted that, in part, the board had caused petitioner's violations which had been subsequently remedied. Therefore, imposition of the penalty was considered unwarranted. *Id.* at 959, 323 N.E.2d at 615. See *Metropolitan Sanitary Dist. v. Pollution Control Bd.*, 62 Ill. 2d 38, 41-44, 338 N.E.2d 392, 394-96 (1975) (where a sewage plant discharged unlawfully while filter was being repaired and where there was no practical alternative but to do so, the board imposed an excessive fine when the violations occurred only once and were promptly remedied).

The Pennsylvania Commonwealth Court reached a similar result. In *Department of Environmental Resources v. Mill Serv.*, 21 Pa. Commw. Ct. 642, 347 A.2d 503 (1975), the discharger appealed from a decision by the Department of Environmental Resources revoking its industrial waste permit. The state claimed that the discharger violated the terms and conditions of the permit when it "intentionally" removed a plug from one of its discharger pipes. However, all the department had demonstrated was that the plug was removed and that the defendant was aware of this. The court, noting that this hardly constituted a showing that the company intended to unlawfully discharge, reversed the decision of the department and fined the discharger \$100.00. In doing so, it stressed the fact that the defendant immediately took steps to comply with the state act and that the discharge was isolated. *Id.* at 647-48, 347 A.2d at 506.

62. 599 F.2d at 927 n.35.

63. The Clean Water Act of 1977, Pub. L. No. 95-217, § 45, 91 Stat. 1584.

64. *Id.*

65. 123 CONG. REC. H12,919 (daily ed. Dec. 15, 1977) (remarks of Rep. Roberts).

66. One congressman stated:

Late issuance of regulations was not the only cause for delay. Sometimes multiple revision of regulations have occurred. Changes in program re-

zations must comply with the Congressional Budget and Impoundment Act of 1974.⁶⁷ As a result, an authorization of funds in the amendments does not have any binding impact in terms of their actual availability.⁶⁸ Indeed, funding rests only on the "hope" that the Budget Committee and the President will provide the needed revenue for long term construction of waste treatment works.⁶⁹ Therefore, in light of the foregoing, it is clear that this amendment, while addressing itself to the problem, has serious deficiencies. Although it recognizes that the problem may arise in the future, Congress allows modification only for past funding shortages.

The second problem with the 1977 deadline was somewhat similar to the first in that it involved claims of economic and technological impossibility. However, in this case, the defense was raised by nonmunicipal dischargers and resulted from Congress' failure to originally perceive the complexity of the task required to achieve the 1977 deadline.⁷⁰ The Third Circuit Court of Appeals confronted this issue in *Bethlehem Steel Corp. v. Train*.⁷¹ The EPA issued an NPDES permit to the steel corporation on December 31, 1974, the last day the Agency could issue such permits.⁷² Pursuant to section 509(b)(1)(f) of the Act,⁷³ Bethlehem Steel appealed the terms and conditions of the permit on the ground that compliance with its terms on or before July 1, 1977 would be impossible in light of the

quirements have sometimes occurred so many times that EPA regional personnel are reluctant to ask applicants for new or additional information.

Let it be clearly understood that the clear intent and determination of the conference committee is that the delays encountered under [the Act] not be repeated with this 1977 legislation.

3 CONG. REC. H12,957 (daily ed. Dec. 15, 1977) (remarks of Rep. Cleveland).

67. Pub. L. No. 93-344, §§ 300-311, 88 Stat. 297 (1974) (codified in scattered sections of 1, 2, 31 U.S.C.).

68. 123 CONG. REC. H12,922 (daily ed. Dec. 15, 1977) (remarks of Rep. Roberts).

69. *Id.*

70. That Congress underestimated the difficulties in achieving the 1977 deadline is illustrated by the impact the legislation has had on the steel industry. It was forced to both modernize its facilities and install abatement devices, both of which require massive capital formation. The result has been considerable financial strain on the industry which, as a result, created possible shutdowns. The House, therefore, favored adding a provision to the Act which would have allowed the President to exempt any category of point sources from compliance with § 301(b)(1) and § 301(b)(2) if he determined that it was in the national interest to do so. 123 CONG. REC. H12,926 (daily ed. Dec. 15, 1977) (remarks of Rep. Roberts). However, the Senate rejected the proposal and it was not included in the amendments. A similar strain has been placed on the Alaska seafood industry. H.R. REP. NO. 139, 95th Cong., 1st Sess., 18-19 (1977).

71. 544 F.2d 657 (3d Cir. 1976).

72. Section 402(k) of the Act, 33 U.S.C. § 1342(k) (Supp. V 1975), states that since the permit granting process was expected to take time, discharges were not in violation of the Act until December 31, 1974. However, by allowing enforcement after that date, Congress contemplated that the task would then be completed and the effluent limitations defined. *National Resources Defense Counsel v. Train*, 510 F.2d 692, 707 (D.C. Cir. 1975).

73. 33 U.S.C. § 1369(b)(1)(F) (Supp. V 1975). This provision states:

Review of the Administrator's action . . . in issuing or denying a permit under section 402, may be had by any interested person in the Circuit Court of Appeals of the United States for the Federal judicial district in which such person resides or transacts such business upon application by any such person.

Id.

extensive construction required.⁷⁴ Although the EPA conceded from the outset that Bethlehem was attempting to meet the deadline,⁷⁵ it argued that the deadline was inflexible and that, therefore, extensions were unlawful.⁷⁶ The court agreed with the EPA and concluded that since the July 1, 1977 deadline was fixed by Congress, the EPA did not have the authority to extend it.⁷⁷ Although the Third Circuit recognized that this interpretation might result in a hardship on the company, it emphasized that the appropriate forum from which to seek relief was Congress.⁷⁸

The court relied on *Virginia State Water Control Board v. Train*⁷⁹ and *Union Electric v. EPA*⁸⁰ for the proposition that Congress alone could grant the relief requested.⁸¹ While those cases clearly support that proposition,⁸² they also include language suggesting that when enforce-

74. 544 F.2d at 661. Throughout the litigation, Bethlehem stressed the disastrous effect of construing the Act as the EPA interpreted it. First, it noted that failure to issue a permit allowing it to continue its efforts to comply with the Act after July 1, 1977 would result in the company either ceasing operations or exposing itself to a penalty of \$25 million for violating its permit. Brief for Appellant at 19. Second, it stressed the EPA's practice of including various target dates leading up to compliance and the fact that the EPA generally took enforcement action when these target dates were not met. In the case of Bethlehem, the dates included the awarding of contracts for construction of abatement devices, several reports of construction progress, and, finally, achievement of the mandated effluent limitations. If the EPA could not extend these target dates to after July 1, 1977, Bethlehem maintained, this practice would be thrown into chaos. Compliance would then have to be achieved almost immediately and any discharger unable to do so would find itself in violation of the Act. *Id.* at 25.

75. EPA's brief to the court stated:

While the company was pursuing its administrative remedies, it submitted to EPA a detailed analysis of the projects required to achieve compliance with its permit, as well as the time needed to complete them. The Agency reviewed this information and concluded that Bethlehem could not expect to complete the required projects prior to July 1, 1977, and that the inability of the Company . . . was not due to any reluctance to proceed on the part of the Company.

Brief of Appellee at 7.

76. *Id.* at 7-19.

77. 544 F.2d at 662.

78. *Id.*

79. 559 F.2d 921 (4th Cir. 1971). See page 894 *supra*.

80. 427 U.S. 246 (1976). In *Union Electric*, petitioner sought review of the Administrator's approval of a state implementation plan under the Clean Air Act, 42 U.S.C. §§ 1857-1857e (1969), as amended by Pub. L. No. 95-95, 91 Stat. 685 (1977) (codified at 42 U.S.C.A. §§ 7401-7642 (Supp. 1978)), after it was told that several of its plants were operating in violation of that plan. The company claimed that it was economically and technologically impossible for the plan's requirements to be satisfied and that, therefore, it should be modified. The Supreme Court rejected this argument. It concluded that any claims brought before a reviewing court must be limited to those factors set forth in § 110(a)(2) of the Clean Air Act, 42 U.S.C.A. § 7410(a)(2) (Supp. 1978), since, if the Administrator finds that they are satisfied, he must approve the plan. 427 U.S. at 257. In examining these criteria, the Court concluded that they did not include the type of claims raised by the petitioner. As a result, the Administrator was not required to consider these claims. Moreover, the court found that petitioner's claims fell outside of its scope of review. *Id.* at 256. The Court distinguished the case from that of an enforcement proceeding where such a claim of economic and technological impossibility may constitute a valid defense. *Id.* at 257 n.5.

81. 544 F.2d at 662-63.

82. *Union Electric v. EPA*, 427 U.S. at 265-66; *State Water Control Board v. Train*, 559 F.2d at 927.

ment measures would actually be imposed, claims of impossibility would, indeed, be relevant. The Fourth Circuit made this clear in *Virginia State Water Control Board*, when it noted that a court called upon to enforce a compliance schedule imposed by the Agency must consider, on a case-by-case basis, whether the government's failure to grant the financial aid it had stated would be available to help dischargers comply with the Act constituted an excuse for noncompliance.⁸³ Similarly, in *Union Electric*, the Supreme Court concluded that any compliance order issued under the Clean Air Act⁸⁴ must necessarily take into account claims of economic impossibility.⁸⁵ Thus, impossibility may very well have been a viable defense for Bethlehem to raise if the EPA had brought an enforcement action.

83. 559 F.2d at 927.

84. Section 113(a) of the Clean Air Act, 42 U.S.C.A. § 7413 (Supp. 1978), authorizes the Administrator to issue a compliance order where a regulated source of air emissions is operating in violation of the Act.

85. 427 U.S. at 268. Although *Union Electric* arose under the Clean Air Act, it is nevertheless analogous to *Bethlehem Steel* for several reasons. First, the structure of both the Clean Air and Clean Water Acts are similar. As was the case in the Clean Water Act, broad national standards are set for both primary and secondary air quality. Clean Air Act, § 109, 42 U.S.C.A. § 7409 (Supp. 1978). These standards are then made applicable to the individual polluter through a state implementation plan, authorized in § 110 of the Clean Air Act, 42 U.S.C.A. § 7410 (Supp. 1978). That plan must include the necessary individual timetables and compliance schedules through which the broader national standards are to be achieved. Accordingly, under both acts, every polluter is given a schedule which will bring it into compliance with the requirements of the statute. Further, the enforcement mechanisms are similar in both acts. As was the case in the Clean Water Act, under the Clean Air Act the Administrator may, following appropriate notification to the state implementing its respective air pollution plan, either issue an order for compliance or bring a civil or criminal action against the alleged violator. Clean Air Act, § 113(a)-(b), 42 U.S.C.A. § 7413(a)-(b) (Supp. 1978). This similarity is further reinforced by § 56 of the Clean Water Act of 1977, (amending 33 U.S.C.A. § 1311 (1977)), which substantially incorporates language found in § 113(a)(4) of the Clean Air Act, 42 U.S.C.A. § 7413(a)(4) (Supp. 1978).

Second, the procedural posture of both cases was identical. In *Bethlehem Steel*, the petitioner challenged the terms and conditions of its NPDES permit, while in *Union Electric*, the petitioner challenged its compliance schedule. Both premised their action on the impossibility of compliance and both defenses were rejected. See Comment, *Pennsylvania Supreme Court Review*, 1976, 50 TEMP. L.Q. 630, 810 (1977) (discussing impossibility defense under Pennsylvania Clean Streams Law). However, unlike the Clean Water Act prior to its amendment, any compliance order issued under the Clean Air Act must take into account good faith efforts to comply. Clean Air Act, § 113(a)(4), 42 U.S.C.A. § 7413(a)(4) (Supp. 1978).

Third, the Supreme Court in *Union Electric*, as well as the Third Circuit in *Bethlehem Steel*, was very careful to emphasize that the case before it was not an enforcement proceeding. Thus, just as the Supreme Court declined to reach the issue of economic impossibility within the context of an enforcement proceeding, 427 U.S. at 269 n.18, so the *Bethlehem Steel* court distinguished review of an NPDES permit from that of an enforcement proceeding. 544 F.2d at 661-63.

The analogy between the Clean Air Act and the Clean Water Act has relevance beyond *Union Electric*. Had the EPA actually brought an enforcement action, there is case law under the Clean Air Act which more directly confronts the economic impossibility defense and which suggests that it may be valid. See *Indiana & Mich. Elec. Co. v. EPA*, 509 F.2d 839, 843-44 (7th Cir. 1975) (holding that claims of economic and technological impact are not relevant when the Administrator approves a state implementation plan, but noting that such claims may be raised in the course of an enforcement proceeding); *Buckeye Power, Inc. v. EPA*, 481 F.2d 162, 172 (6th Cir. 1973) (holding that the EPA, in approving a state implementation plan, need not conduct a full scale hearing on claims of impossibility by petitioners because those claims can be asserted as a defense to a state or federal enforcement proceeding).

The significance of *Bethlehem Steel* rests on its procedural posture. Bethlehem was seeking a review of its permit and not defending itself against a criminal and/or civil enforcement action. Thus, a decision against Bethlehem had the effect not of imposing sanctions, but rather of finalizing a permit which required compliance with the Act on or before July 1, 1977. Further, the EPA had indicated that it probably would not bring an enforcement action against the company when it failed to meet the deadline.⁸⁶ Therefore, sanctions appeared unlikely, while the predicted imminent forced closing of the company was speculative.⁸⁷

The precise issue in *Bethlehem Steel* was whether the Administrator could extend the July 1, 1977 deadline included in a permit issued to a discharger. The Third Circuit concluded that the Act prevented the Administrator from doing so. Congress responded and, accordingly, has modified the Act. Section 56 of the Clean Water Act permits the Administrator to grant an extension of the originally mandated 1977 deadline if he finds that the discharger has made a good faith effort to comply with the Act by committing itself to the needed construction and securities contracts, that continuing discharges will not result in the imposition of additional controls on other dischargers, that an application for an NPDES permit was made prior to December 31, 1974, and that the facilities needed to achieve compliance are under construction at the time the extension is requested.⁸⁸ The amendment is nothing less than a direct and effective means to solve the dilemma posed in the *Bethlehem Steel* case. On the one hand, it requires a showing of good faith so that any discharger attempting to use the procedure to stall for unnecessary additional time will still be considered in violation of the law.⁸⁹ On the other hand, the

86. It is reasonable to assume that the EPA could not guarantee that it would decline to bring such an action since this would be tantamount to exempting Bethlehem from the Act. Further, by declining to give such assurances, the EPA was able to hold out the threat of enforcement if it became evident that Bethlehem was no longer making a good faith effort to comply with the Act.

87. Although the company implied that it would close if it was forced to operate in violation of the law, Brief for Appellant at 19, it is difficult to imagine that it would in fact do so. See note 74 *supra*.

88. Clean Water Act of 1977, Pub. L. No. 95-217, § 56, 91 Stat. 1592. Section 309(a)(5)(B) of the Act, 33 U.S.C.A. § 1319(a)(5)(B) (Supp. 1978), now provides:

The Administrator may, if he determines (i) that any person who is a violator of, or any person who is otherwise not in compliance with, the time requirements under this Act or in any permit issued under this Act, has acted in good faith, and has made a commitment (in the form of contracts or other securities) of necessary resources to achieve compliance by the earliest possible date after July 1, 1977, but not later than April 1, 1979; (ii) that any extension under this provision will not result in the imposition of any additional controls on any other point or nonpoint source; (iii) that an application for a permit under section 402 of this Act was filed for such person prior to December 31, 1974; and (iv) that the facilities necessary for compliance with such requirements are under construction, grant an extension of the date referred to in section 301(b)(1)(A) to a date which will achieve compliance at the earliest time possible but not later than April 1, 1979.

89. Throughout debates on these amendments, Congress stressed the requirement of good faith and noted that it would not be appropriate to stigmatize those dischargers who in good faith attempted compliance, by holding them in violation of the law. H.R. REP. No. 830, 95th Cong., 1st Sess. 89 (1977). The Report of the House

Administrator now has the authority to extend a permit deadline when absolutely necessary. Therefore, this amendment avoids the potentially futile situation where the Administrator may be required⁹⁰ to bring an enforcement action knowing full well that a court, called upon to enforce the order, would probably take into account any impossibility claims raised by a discharger. Such claims are now to be considered at the administrative stage where the necessary expertise lies.

The third and final problem with the Act was caused by the failure of the EPA to publish effluent guidelines and issue permits to dischargers in a timely manner.⁹¹ The case of *U.S. Steel v. Train*⁹² presented both issues. First, plaintiff argued that because of delays in the administrative

Committee on Public Works and Transportation further emphasized that these extensions are "not intended to reward industries which have not proceeded forthrightly to live up to their obligations. It is not intended that dischargers which are on schedule to meet [the 1977 deadline] be given additional time to comply with the law or that those already in compliance be allowed to reduce operating and maintenance costs by reducing their level of control." H.R. REP. No. 139, 95th Cong., 1st Sess. 19 (1977).

90. At the present time, courts appear to be split on whether the Administrator can be compelled to bring an enforcement action through a citizen's suit against him. Section 505(a)(2) of the Act, 33 U.S.C. § 1365(a)(2) (Supp. V 1975), states that "[a]ny citizen may commence a civil action on his own behalf . . . against the Administrator . . . to perform any act or duty under this Act which is not discretionary with the Administrator." Section 309(a)(3) of the Act, 33 U.S.C.A. § 1319(a)(3) (Supp. 1978), further states that "[w]hen . . . the Administrator finds that any person is in violation of section 301 . . . he shall issue an order requiring such person to comply or he shall bring a civil action . . ." Finally, § 309(a)(4) of the Act, 33 U.S.C.A. § 1319(a)(4) (Supp. 1978), states that "any order issued under this subsection shall . . . specify a time for compliance not to exceed thirty days." Therefore, as soon as the Administrator finds that a discharger has not complied, it would appear that he must perform a non-discretionary function insofar as bringing an enforcement action is concerned. Thus, failure to either issue an order which requires compliance within thirty days or to bring a civil suit could subject him to a citizen's suit. See *United States v. Phelps Dodge Corp.*, 391 F. Supp. 1181, 1183-84 (D.C. Ariz. 1975) (holding that when the Administrator becomes aware of a violation of the Act he is required to bring an enforcement action).

However, notwithstanding this facial reading of the Act, there is authority for the proposition that enforcement actions are purely discretionary, and that, therefore, the citizen's suit provision is inapplicable. Committee for Consideration of Jones Fall Sewage Sys. v. *Train*, 387 F. Supp. 526, 529-30 (D. Md. 1975) (holding that a citizen's suit was not proper when brought to compel the Administrator to perform certain discretionary functions, one of which was enforcement of the Act). Regardless of the ultimate outcome of this debate, it is, in a sense, academic in light of 33 U.S.C. § 1365(a)(1) (Supp. V 1975). This provision permits any citizen to bring a civil action on his own behalf against any person who is not in compliance with the Act. Therefore, as soon as the Administrator issues a permit, he has necessarily established a standard the discharger must satisfy. Failure to do so renders the discharger in violation of the Act and accordingly subject to suit by any citizen. In the *Bethlehem Steel* case, Bethlehem argued that for this reason, no matter how many assurances the EPA gave that no enforcement action would be taken, the company would still be subject to suit. Brief for Appellant at 14. This was also the basis for the court's conclusion that the case before it was not rendered moot by the EPA's assurances. 544 F.2d at 660.

91. The guidelines were to be promulgated by October 18, 1973 for the 1977 standards and all permits were to be issued on or before December 31, 1974. See notes 16 and 72 *supra*.

92. 556 F.2d 822 (7th Cir. 1977). Only those claims dealing directly with the July 1, 1977 deadline were examined. Several procedural issues were raised by *U.S. Steel*, including the application of several provisions of the Administrative Procedure Act, 5 U.S.C. §§ 554, 556, and 557 (1976), as well as various evidentiary issues. 556 F.2d at 832.

process, it received its permit too late for it to comply with its terms. Second, it contended that since the EPA did not issue effluent guidelines for the steel industry in a timely manner, it was entitled to an extension of the 1977 deadline. The court rejected both theories.⁹³ U.S. Steel had initially applied for a permit in 1971, when the predecessor to the permit program was under the jurisdiction of the Army Corps of Engineers.⁹⁴ Following enactment of the Federal Water Pollution Control Act, permit applications under the original program were deemed to be applications for NPDES permits and were accordingly transferred to the EPA.⁹⁵ Although the EPA issued a permit to U.S. Steel in October, 1974,⁹⁶ the company was not satisfied with either the effluent limitations or the monitoring requirements which were imposed, and it requested an administrative hearing.⁹⁷ Following a hearing by the Regional Administrator,⁹⁸ who approved a new permit which was still objectionable to the company, U.S. Steel appealed to the Administrator,⁹⁹ who also declined to modify the permit. The permit was reissued in final form by the EPA on June 25, 1976, after which the company filed a petition for review in the Court of Appeals for the Seventh Circuit.¹⁰⁰ The company argued that due to this two year delay, it would be impossible for it to install the recycling system needed to achieve compliance with the terms and conditions of the permit.¹⁰¹

The court considered the temporary delay during the administrative process irrelevant in determining whether a permit was properly issued and whether compliance with its terms could reasonably be expected.¹⁰² Drawing an analogy to the Clean Air Act,¹⁰³ the court stated that the

93. 556 F.2d at 854.

94. River and Harbor Act, ch. 425, § 13, 30 Stat. 1152 (1899) (current version at 33 U.S.C. § 407 (1970)), provided in part for the Secretary of the Army to issue permits allowing the discharge of pollutants into the navigable waters of the United States.

95. 33 U.S.C. § 1342(a) (5) (Supp. V 1975) states in pertinent part:

No permit for a discharge into the navigable waters shall be issued under section 13 of the Act of March 3, 1899, after the date of the enactment of this title. Each application for a permit under section 13 of the Act of March 3, 1899, pending on the date of enactment of this Act shall be deemed to be an application for a permit under this section. . . .

96. 556 F.2d at 831.

97. Such hearings are provided for in 40 C.F.R. § 125.36 (1976).

98. 40 C.F.R. § 125.36 (1977) provides for administrative appeals of the terms and conditions of any permit issued by the EPA. Since the EPA administers the Act on a regional basis, through its regional offices, a permit holder must first appeal to the Regional Administrator for relief. If unsuccessful, it may then appeal to the Administrator of the entire Agency.

99. 40 C.F.R. § 125.36(n) (1) (1976) states: "Any party may file a petition for the Administrator's review of the initial decision of the regional Administrator or the decision of the Assistant Administrator for Enforcement and General Counsel relied thereon by the Regional Administrator in ordering the initial decision."

100. 556 F.2d at 831.

101. *Id.* at 854.

102. *Id.*

103. See note 85 *supra*.

Federal Water Pollution Control Act set up uniform national standards and if a discharger wanted a variance from those requirements, litigation in pursuit of such a modification was not a basis for waiving those standards.¹⁰⁴ Thus, because the original permit was granted well before the December 31, 1974 deadline for issuing permits, and because testimony indicated that there was ample time from the issuing date to July 1, 1977 for the company to achieve compliance, the permit was found to be reason-

104. 556 F.2d at 847. The court explicitly based this conclusion on *Train v. Natural Resources Defense Counsel*, 421 U.S. 60, 92 (1975), a case which arose under the Clean Air Act. That Act required the Administrator to promulgate primary and secondary standards for the attainment of ambient air standards. Clean Air Act, § 109(a)(1), 42 U.S.C.A. § 1857c-4(a)(1) (1969) (amended 1977). Primary standards were those needed to protect the public health, and secondary standards were those needed to generally protect the public welfare, but if violated, would not endanger the public health. *Id.* § 109(b)(1)-(2), 42 U.S.C.A. § 1857c-4(b)(1)-(2) (1969) (amended 1977). Each state was required by § 110(a)(1) of the Clean Air Act, 42 U.S.C.A. § 1857c-5(a)(1) (1969) (amended 1977), to submit a state implementation plan which needed to satisfy certain criteria set forth in the subsequent provision. The Georgia plan, which was approved by the Administrator and was the subject of the suit, provided for emission limitations which were to go into effect immediately. However, it also included a variance procedure by which a particular source could request and be granted relief from the plan's requirements. 421 U.S. at 69-70. It was this variance provision which was at issue. The Agency based its approval of the plan on § 110(a)(3) of the Act, 42 U.S.C.A. § 1875c-5(a)(3) (1969) (amended 1977), which stated that the Administrator shall approve any revision of an implementation plan which meets the § 110(a)(2) requirements needed for original approval. Since that provision included a final date, and since a variance would not normally extend beyond that date, the effects of such a revision would not impair attainment of the original requirements of § 110(a)(2). 421 U.S. at 70. Therefore, the EPA concluded that variance could be granted freely where "the national standards have been attained and the variance is not so great" that the revision would undermine their continued maintenance. *Id.* at 77. Natural Resources Defense Counsel (NRDC) argued that any revision in a state plan could not be granted by § 110(a)(3), but rather could only be granted if they met the more stringent requirements of § 110(f) of the Act, 42 U.S.C.A. § 1857c-5(f) (1969) (amended 1977). The latter provision provided for a one year postponement of a state plan if the Administrator found that good faith efforts to comply with the requirements had been made, that there was a lack of needed methods of control through which compliance could be achieved, that an alternative and interim control measure would reduce the impact of pollution from the source, and that the continued operation of the source was essential to national security or to the public health and welfare. 421 U.S. at 77.

Examining the legislative history of both provisions, the Supreme Court concluded that § 110(f) was the means by which the implementation of an entire plan was extended. *Id.* at 80-86. It further held that § 110(a)(3) was designed to insure that states could have control over the proper mix to be used in achieving the national standard. Thus, the states could impose any degree of emission requirements on any individual pollutor so long as all such requirements imposed on all pollutors together achieved compliance with the national standard. *Id.* at 80. Therefore, the Court believed that accepting the reasoning of the NRDC would seriously undermine the role of the states; instead of § 110(f) remaining applicable only to the state plan as an entity, its interpretation would suggest that the federal government had to approve every revision in every state program. *Id.* at 87.

NRDC additionally argued that treating variances under the § 110(a)(3) procedure would result in protracted litigation with respect to whether the pollutor requesting the variance was responsible for not achieving or maintaining national ambient air standards in a given area where other pollutors were also located. Rejecting this argument, the Court noted that each source was subject to enforcement proceedings until it had actually received its variance. Therefore, although a pollutor was entitled to seek judicial review of its individual compliance schedule, this review was to be carried out on the pollutor's time. Since the regulations remain in effect until actually modified, failure to satisfy them during review may subject the pollutor to enforcement action. *Id.* at 91-92. As a result, insofar as enforcement of the standards is concerned, the fact that a pollutor is appealing a given requirement is irrelevant.

able.¹⁰⁵ Citing *Bethlehem Steel*,¹⁰⁶ the court further noted that a lack of time to satisfy the requirements was not a factor to be considered under section 304(b) of the Act,¹⁰⁷ which sets forth considerations that the Administrator must take into account when setting effluent guidelines.¹⁰⁸ Therefore, this was an insufficient basis upon which to request a variance.

Additionally, the *U.S. Steel* court was not convinced by the company's contention that it was entitled to an extension of the July 1, 1977 deadline because effluent guidelines for the steel industry were not published in a timely manner.¹⁰⁹ While the court decried the EPA's practice of including in a compliance schedule dates that had already passed, it noted that the EPA had admitted that no enforcement action could be brought for failure to meet those deadlines without violating due process.¹¹⁰ In addition, citing *Union Electric*¹¹¹ and *Bethlehem Steel*,¹¹² the court stressed the rigidity of the July 1, 1977 deadline.¹¹³ The court noted that even if there were no industry-wide effluent guidelines established, the fact that the Agency had granted a permit to the company was, in itself, promulgation of the appropriate guidelines insofar as the company was concerned.¹¹⁴ Therefore, so long as the permit was issued to the discharger on or before December 31, 1974, its terms and conditions were valid, regardless of when the appeals route was exhausted and the effluent guidelines promulgated. Accordingly, an extension of the July 1, 1977 deadline was unwarranted.¹¹⁵

105. 556 F.2d at 854.

106. 544 F.2d 657 (3d Cir. 1976). See pages 897-901 *supra*.

107. 33 U.S.C. § 1314(b) (Supp. V 1975).

108. 556 F.2d at 847.

109. *Id.* at 854.

110. *Id.* Bethlehem Steel and Republic Steel, which had submitted an amicus brief, contended that the compliance schedule imposed on Bethlehem was arbitrary and capricious because its achievement would be impossible. Brief of Amicus Curiae, Republic Steel at 17-18. Further, they argued that because of the failure of the EPA to promulgate effluent guidelines in a timely manner, they had inadequate warning of what compliance with the Act would entail. As a result, immediate compliance could not be expected. *Id.* at 21. Finally, they argued that to impose and enforce such requirements would constitute an unlawful appropriation of property under the due process clause of the fifth amendment. *Id.* at 22.

Rather than directly confronting these arguments, the EPA responded that the contention was raised prematurely for two reasons. First, whether or not any sanctions would be sought was speculative at the time of the hearing. Brief of Appellee at 26-28. Second, even if Bethlehem lost this case, it would not have to markedly change its conduct. Indeed, at the absolute worst, it would have to continue installing abatement equipment in an expeditious manner, something the EPA agreed it was already doing. *Id.* at 28.

111. See note 80 *supra*.

112. See pages 897-901 *supra*.

113. 556 F.2d at 854.

114. The court stated:

Although EPA's guidelines were then in effect, BPT [Best Practicable Control Technology] and the resulting effluent limitations would have been determined in the permit proceeding itself if they had not yet been promulgated. [Citation omitted]. Thus, it appears that the obligations imposed on an individual discharger by the permit are enforceable according to the statutory timetable whether or not they are based on previously issued guidelines.

Id. at 854-55.

115. *Id.* at 855.

*Republic Steel v. Train*¹¹⁶ similarly illustrates the problem of Agency delay. However, in that case, the company was successful in its efforts to get an extension of the 1977 deadline. The EPA had delegated permit issuing authority to Ohio in March of 1974,¹¹⁷ but, as of that date, it had failed to promulgate any federal effluent guidelines governing alloy and stainless steel operations.¹¹⁸ At the same time, Republic had applied for an NPDES permit, which was issued in draft form and included the only promulgated standards—those established by the state.¹¹⁹ The steel company appealed the terms and conditions of this first permit, and a modified permit was issued by Ohio on August 1, 1975, seven months after the December 31, 1974 permit-issuing deadline.¹²⁰ In light of the uncontroverted technical data submitted to it, the state subsequently amended Republic's permit to give it forty-two months in which to achieve compliance with the 1977 standards.¹²¹ Inasmuch as this gave the company an extension of the July 1, 1977 requirement, the EPA vetoed the permit.¹²² Republic then petitioned the Court of Appeals for the Sixth Circuit, requesting review of this action.

On appeal, Republic argued that the failure of the EPA to promulgate effluent guidelines for its industry class and category excused compliance with the 1977 deadline because Agency action setting forth the relevant guidelines was a condition precedent to requiring a discharger to achieve compliance with those standards by July 1, 1977.¹²³ The EPA argued that Congress intended this deadline to be rigid, that it had the authority to issue, enforce, and veto any permit which included conditions the Administrator considered unnecessary or counter-productive in carrying out the Act, that such permit-regulating authority was independent from the requirement that it promulgate effluent guidelines, and that, therefore, it had the authority to veto any permit which extended the July 1, 1977 deadline since compliance with the Act precluded any such extension.¹²⁴

116. 557 F.2d 91 (6th Cir. 1977).

117. *Id.* at 93.

118. Final regulations for these processes were not announced as of June 23, 1977, the date of the *Republic Steel* opinion. *Id.* at 94.

119. *Id.* at 93.

120. *Id.* at 94.

121. *Id.*

122. The Federal Water Pollution Control Act, Pub. L. No. 92-500, § 402 (d)(2)(B), 86 Stat. 882 (1973) (current version at 33 U.S.C. § 1342(d)(2)(A) (Supp. V 1975)), as amended by Clean Water Act of 1977, Pub. L. No. 95-215, § 65, 91 Stat. 1599 (1977), authorizes the Administrator to veto any permit issued by any state if he concludes that it is not in compliance with the Act. That provision states: "No permit shall issue . . . if the Administrator within ninety days of the date of transmittal of the proposed permit by the State objects in writing to the issuance of such permit as being outside the guidelines and requirements of this chapter." *Id.*

123. 557 F.2d at 95.

124. The EPA presumably rested this argument on the theory set forth by the court in *U.S. Steel*, which suggested that when guidelines are not promulgated and the EPA issues a permit, as to that discharger, guidelines are in effect issued as well. See note 114 *supra*. The implication of this theory is that when the EPA vetoes a permit and has not yet promulgated guidelines, it is indicating that, as to the discharger involved, guidelines are something other than that which the state

The Sixth Circuit held for *Republic*.¹²⁵ First, it noted that the federal industry-wide guidelines were an integral part of the Act since they provided for minimum national standards.¹²⁶ However, if there were no federal standards promulgated, and a state had been delegated permit-issuing authority, any state could have imposed its standard of control since the state standard would be, by definition, more stringent than that of the federal government.¹²⁷ Rather than allow the EPA to veto any

determined should apply. However, this logic was not accepted by the Court of Appeals for the Sixth Circuit. In *Ford Motor Co. v. EPA*, 567 F.2d 661 (6th Cir. 1977), petitioner was issued an NPDES permit by Michigan, which had been delegated permit-issuing authority by the EPA. The permit was initially issued in December, 1974. However, Ford requested permit modifications based on the use of flow augmentation, a process involving the mixing of treated effluent water to prevent concentration of pollutants in a manner prohibited by the Act. *Id.* at 665. The EPA vetoed the requested modification and Ford appealed. The court agreed with the company and concluded that the government's action was erroneous. First, it noted that the EPA was required to promulgate national guidelines for effluent limitations including flow augmentation and that it had failed to do so. *Id.* at 663. Second, it concluded that the only time the EPA could veto a state-issued permit was when that permit was outside the guidelines or requirements of the Act. Therefore, since no guidelines or requirements existed with respect to flow augmentation, the EPA had no basis on which to veto the permit. *Id.* at 671.

The identical issue arose within the context of an enforcement proceeding in *United States v. Georgia-Pacific*, 10 E.R.C. 1872 (W.D. Wash. 1977). The State of Washington issued Georgia-Pacific an NPDES permit for the pulp mill it operated in that state. Following several administrative appeals, a permit was issued pursuant to an agreed order entered by the state pollution hearing board on November 30, 1976. The EPA thereupon vetoed this less stringent permit and the company appealed to the Ninth Circuit Court of Appeals. While this appeal was pending, the federal government brought an action to force compliance with an enforcement order it had issued. *Id.* at 1872-73. The company argued that the EPA's veto of the second permit was invalid because there were no regulations or effluent guidelines governing pulp mills, and, as a result, it could not enforce that second permit. *Id.* In granting the government's motion for summary judgment, the court concluded that enforcement action was warranted since the defendant was discharging in violation of the law. Noting that the propriety of the EPA veto was exclusively within the jurisdiction of the court of appeals, it pointed out that any modification of a permit is to be completed on the polluter's time and that, under the reasoning of *Train v. National Resources Defense Counsel*, 421 U.S. 60 (1975), the pendency of an appeal was wholly irrelevant. However, the court concluded that the appropriate remedy was not to enforce the compliance order suggested by the EPA; rather, it ordered the company to comply with the first permit. In declining to enforce the government's more strict order, it noted that the EPA had failed to promulgate the needed effluent guidelines for pulp mills, and, as a result, a considerable degree of uncertainty existed with respect to what the Act required. 10 E.R.C. at 1875.

Reading these cases in conjunction with *Republic Steel*, it appears that when a federal permit is issued, so long as it was issued prior to December 31, 1974, it is valid notwithstanding the failure to promulgate regulations. However, under the reasoning of *Ford Motor Company*, if the federal government delegates the permit program to the states and fails to promulgate guidelines, it is impossible for the EPA to veto any permit granted. This implies that the EPA veto questioned in *Georgia-Pacific* was, indeed, unlawful since the permit was issued by the State of Washington and since the EPA had failed to promulgate the requisite effluent guidelines.

125. *Republic Steel Corp. v. Train*, 557 F.2d at 97.

126. *Id.* at 95.

127. *Id.* Section 301(b)(1)(C) of the Act, 33 U.S.C. § 1311(b)(1)(C) (Supp. V 1975), permits the states to impose any standard on dischargers which is more strict than that imposed by the federal government. It states that there shall be achieved

not later than July 1, 1977, any more stringent limitation, including those necessary to meet water quality standards, treatment standards, or schedules of compliance, established pursuant to any State law or regulations (under authority preserved by section 1370 of this title) or any other Federal law or

permit which it considered inadequate on an ad hoc basis, the court found that the Agency's failure to promulgate guidelines rendered section 301 (b)(1)(A)¹²⁸ of the Act unenforceable. Since the July 1, 1977 deadline, as well as the requirements for national standards, were included in that section, it followed that the deadline was rendered unenforceable. Therefore, the EPA could not veto the permit on the ground that it did not require compliance by July 1, 1977.¹²⁹ Second, the court distinguished *Bethlehem Steel*¹³⁰ and *U.S. Steel*.¹³¹ In *Bethlehem Steel*, the relevant NPDES permit was issued on December 31, 1974, which was within the statutory deadline and which gave the company thirty months in which to achieve compliance.¹³² Similarly, in *U.S. Steel*, the permit was issued by the EPA in October of 1974, within the statutory deadline. Thus, the discharger had at least thirty-two months in which to achieve the required degree of compliance.¹³³ However, in *Republic Steel*, the permit was not issued until August, 1975. Therefore, the company had only twenty-four months to comply. In view of this inequity, the court remanded the case to the EPA, ordering it to approve the issuance of the state permit notwithstanding the fact that it extended beyond the July 1, 1977 deadline.¹³⁴ Thus, the court did extend the deadline, but only to the extent that administrative delay was responsible for delays in the company's compliance.

The complicated problems raised in both *U.S. Steel* and *Republic Steel* are only partially resolved by the amendments. To the extent that *Republic Steel* can be read for the proposition that absent effluent guidelines, the EPA cannot veto a state-issued NPDES permit,¹³⁵ it has been overruled. Section 65 of the Clean Water Act¹³⁶ amends the Act so that if the Administrator objects to a state-issued permit and no effluent guidelines have been issued, he may still ultimately veto the permit. However, he must first state his reasons for so doing, and declare what effluent

regulation, or required to implement any applicable water quality standard established pursuant to this chapter.

128. 33 U.S.C. § 1311(b)(1)(A) (Supp. V 1975). See note 19 *supra* for the text of this provision.

129. *Republic Steel Corp. v. Train*, 557 F.2d at 97.

130. 544 F.2d 657 (3d Cir. 1976).

131. 556 F.2d 822 (7th Cir. 1977).

132. 557 F.2d at 96.

133. *Id.* at n.16. In addition, the court distinguished *United States v. Cutter Laboratories*, 413 F. Supp. 1295 (E.D. Tenn. 1976). The *Cutter* court held that enforcement proceedings could be brought when an NPDES permit issued by the EPA was violated, even though the standards included in that permit amounted to interim standards based only on the best engineering judgment of the Agency. *Id.* at 1298. Unlike *Republic Steel* and *Ford*, this was a federal permit. Thus, insofar as it set effluent limitations for the discharger, it is considered to be no different from limitations promulgated by the EPA.

134. 557 F.2d at 98.

135. It is difficult to state exactly what the court in *Republic Steel* held. While the July 1, 1977 deadline was unenforceable because the EPA failed to promulgate effluent guidelines, the remedy imposed reflected the Agency's delay with respect to permit issuance. Had it simply improperly delayed the permit while at the same time promulgated guidelines, the remedy would suggest that the company would still be entitled to an extension.

136. The Clean Water Act of 1977, Pub. L. No. 95-217, § 65, 91 Stat. 1599.

limitations he would impose on the discharger were he issuing the permit.¹³⁷ If, following a public hearing, the state still objects or fails to request such a hearing, the Administrator may issue the discharger a permit as if the program were under federal control.¹³⁸

The legislative history of this amendment, however, is not nearly as clear as a simple reading of the provision would indicate. The conference report¹³⁹ states that the change in the law was designed to avoid the situation where a discharger is left open to an enforcement action following the EPA's veto of a state-issued permit while the veto is being appealed in the circuit courts. Further, the report indicates that in the event of an impasse between the states and the federal government, the latter should have the authority to issue the permit.¹⁴⁰ However, when the conference report was presented to the House of Representatives, Congressman Roberts¹⁴¹ minimized this increased role of the federal government. Indeed, he suggested that the modification would grant the EPA authority to issue a permit only when the state-issued permit would be clearly outside the guidelines and requirements of the Act.¹⁴² In addition, he stated that the role of the states under this new provision would remain essentially unchanged and that by assuming permit-issuing authority, the states would be primarily involved in administering the program.¹⁴³ It is difficult to understand exactly what Congressman Roberts was referring to when he presented this section of the amendments to the House. Clearly, in light of the case law this provision seeks to modify, the states do play a more limited role than that which they occupied under the Act as originally drafted. Prior to the amendments, the federal government was unable to veto a state-issued permit absent federally promulgated effluent guidelines. Under the new provisions, the EPA is permitted to do just that. Ac-

137. The pertinent provisions of § 65 of the Clean Water Act of 1977 read:

"(4) In any case where, after the date of enactment of this paragraph, the Administrator, pursuant to paragraph (2) of this subsection, objects to the issuance of a permit, on request of the State, a public hearing shall be held by the Administrator on such objection. If the State does not resubmit such permit revised to meet such objection within 30 days after completion of the hearing, or, if no hearing is requested within 90 days after the date of such objection, the Administrator may issue the permit pursuant to subsection (a) of this section for such source in accordance with the guidelines and requirements of this Act."

(b) Section 402(d)(2) of the Federal Water Pollution Control Act is amended by adding at the end thereof the following new sentence: "Whenever the Administrator objects to the issuance of a permit under this paragraph such written objection shall contain a statement of the reasons for such objection and the effluent limitations and conditions which such permit would include if it were issued by the Administrator."

138. *Id.*

139. H.R. REP. NO. 830, 95th Cong., 1st Sess. 96-97 (1977).

140. *Id.*

141. Congressman Roberts was actively involved in the conference committee and presented the report to the House. *Id.* at 1.

142. 123 CONG. REC. H12,931 (daily ed. Dec. 15, 1977) (remarks of Rep. Roberts).

143. *Id.*

cordingly, this amendment marks a step forward in fully articulating Congress' intended relationship between the EPA and the states.

Unlike the case of a state-delegated NPDES permit, the recent changes in the Act do not adequately address the problem of Agency delay with respect to the issuance of effluent guidelines. The Administrator is given two options when faced with a discharger operating in violation of the law. First, he can grant the discharger an extension of the July 1, 1977 deadline, provided that it meets the narrowly drawn requirements of the Act.¹⁴⁴ Second, the Administrator can issue an enforcement order which must include a compliance schedule setting forth when the final effluent limitations must be achieved.¹⁴⁵ In the case of the first option, a discharger would not be considered to be operating in violation of the law since its final deadline would be extended. In the case of the second option, however, no such allowance is made, and, although acting in compliance with a revised schedule, the discharger is still technically in violation of the law.¹⁴⁶ Indeed, the conferees stated that when such an order is issued, the Administrator may require the discharger to meet any interim requirements he deems appropriate.¹⁴⁷

The problem with these two options with respect to Agency delay is illustrated by a hypothetical discharger who is attempting in good faith to comply with effluent guidelines not yet promulgated in final form by the Agency, but which were set for the industry through the issuance of its NPDES permit. Should the Administrator find that extending the discharger's permit past July 1, 1977 would result in the need for greater controls elsewhere to maintain the standards established by the Act, he will be precluded from exercising his first option. However, the second option is not entirely helpful to the discharger since only if the Administrator exercises his first option is an extension in fact granted and the discharger considered in compliance with the Act. Therefore, the legal status of the operation is not determined by the company's good faith efforts to comply. Rather, the controlling factor is whether additional controls would have to be imposed on other point sources or dischargers to achieve reduction of pollution in a particular body of water. That the Agency's failure to promulgate guidelines may have contributed to the failure to achieve the compliance schedules is wholly irrelevant.¹⁴⁸

144. See note 88 *supra*.

145. The Clean Water Act of 1977, Pub. L. No. 95-217, § 56, 91 Stat. 1592, amends 33 U.S.C. § 1319 (Supp. V 1975) and provides that:

Any order issued under this subsection shall be by personal service, shall state with reasonable specificity the nature of the violation, and shall specify a time for compliance not to exceed thirty days in the case of a violation of an interim compliance schedule or operation and maintenance requirement and not to exceed a time the Administrator determines to be reasonable in the case of a violation of a final deadline, taking into account the seriousness of the violation and any good faith efforts to comply with applicable requirements.

146. H.R. REP. No. 830, 95th Cong., 1st Sess. 89 (1977).

147. *Id.*

148. This problem is further exacerbated by the amendments which provide for the promulgation of yet another standard of control. "Best conventional technology"

Further, the present amendments may actually create additional problems with respect to permit issuance. Prior to the amendments, all permits were to be issued on or before December 31, 1974, and most dischargers had to achieve the first level of compliance by July 1, 1977.¹⁴⁹ Thus, Congress had given each discharger thirty months to meet the requirements of the Act. Under the amended Act, it is impossible to determine precisely how much lead time is available for permit extensions. In the case of a publicly owned treatment works, application for permit modifications must be made within 180 days following the enactment of the amendments.¹⁵⁰ However, no time limit is placed on Agency-issuance of these modifications. Consequently, it is not difficult to envision a situation where a municipality applies for an extension after receiving inadequate funding, encounters administrative delay, and is given a permit which includes a compliance schedule impossible to satisfy. Since the Act does not clearly state how much time is to be given to such dischargers, Agency enforcement is limited only by the judicial process, as was the case in *Bethlehem Steel*. In the case of a discharger other than a publicly owned treatment works, the amendments are equally difficult to apply. Notwithstanding Agency failure to issue a permit in a timely manner, the only means to get an extension is for the Administrator to find that all the conditions set forth in section 309(a)(5)(B)¹⁵¹ are satisfied. However, as was suggested with respect to effluent guidelines, a discharger may not be able to satisfy these requirements for reasons solely beyond its control and, therefore, not be eligible for an extension. As a result, it would be forced to operate in violation of the law.

IV. CONCLUSION

The enactment of the amendments signifies a growing awareness on the part of Congress that cleaning up this nation's waters will be a much more complex task than was anticipated when the Act was initially adopted. As a result, the failure of the Act to provide the Administrator with greater flexibility in enforcing the 1977 deadline would have created a near impossible task for both the EPA and the courts: enforcing what, in some cases, would have been a deadline impossible to meet and determining,

is to serve as a substitute in some cases for the previously required 1983 standards. The Clean Water Act of 1977, Pub. L. No. 95-217, § 42, 91 Stat. 1582. This standard is a reflection of the view that the 1977 standards proved more rigid than expected and that, as a result, water quality improved to a much greater degree than expected. 123 CONG. REC. H12,940 (daily ed. Dec. 15, 1977) (remarks of Rep. Clausen). In addition, Congress felt that treatment for treatment's sake, which would require a great expenditure for minimal improvement in water quality, was useless. *Id.* at 12,944 (remarks of Rep. Johnson). Therefore, rather than clearly delineating the remedy available to a discharger facing Agency delay in issuing standards, Congress enacted a third standard which must be satisfied.

149. See notes 19 and 27 *supra*.

150. The Clean Water Act of 1977, Pub. L. No. 95-217, § 45, 91 Stat. 1584.

151. See note 88 *supra*.

without any congressional guidance, the impact of the Act on an individual discharger unable to meet its legal obligations.¹⁵²

However, the amendments clearly do not resolve all of the problems which resulted from efforts to enforce the law as it was originally enacted. Although Congress has given relief to sewage treatment works unable to achieve compliance due to inadequate or nonexistent federal funding, the relief is only helpful to the extent that the discharger has failed to receive such funds in the past. Despite Congress' recognition that the problem may reappear again, it did not extend relief to such future difficulties. Further, although the state and federal roles in the NPDES program have been clarified, the amendments do not provide guidance if permits or guidelines are issued in an untimely manner. Therefore, the viability of a defense based on administrative delay remains an open question which will ultimately have to be resolved by the courts on a case-by-case basis. Accordingly, to the extent these problems remain in the Act, Congress has failed to ease the burden placed on the administrative and judicial processes by this nation's efforts to clean up its waters.

152. The alternative to the amendments was a policy devised by the EPA and the Justice Department in which every discharger in violation of the Act could be issued an Enforcement Compliance Schedule Letter (ECSL). This was a letter which stated that a discharger was not in compliance with the Act, but that no enforcement action would be taken so long as it met the terms and conditions set forth therein. *Enforcement Actions*, *supra* note 61, at 1-3.

INDUSTRIAL SITING: ALLOCATING THE BURDEN OF POLLUTION†

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Major industrial expansion is becoming an increasingly perilous process. For example, on January 19, 1977, the Dow Chemical Company announced that, after expending more than two years of effort and substantial sums on attempts to gain the necessary permits for the facility, plans for a petrochemical project in the Sacramento river delta area of Northern California had been "indefinitely delayed."¹ In announcing the cancellation, R.I. Brubaker, General Manager of Dow's Western Division, said that "the permitting process for new facilities has proved to be so involved and expensive that for the time being at least it is impractical to continue with this project."²

This announcement came in the midst of Dow's appeal from the San Francisco Bay Area Air Pollution Control District's denial of authority to construct.³ This agency was created by state law⁴ and is empowered to implement the new source review procedures of the state's implementation plan filed under the Clean Air Act.⁵ Although Dow's projected emissions would have been within the limits required by federal and state law and the District's regulations, Dow had failed to

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1. Dow Chemical Corp., Press Release (Jan. 19, 1977).

2. *Id.*

3. Letter from Bay Area Air Pollution Control District to Western Division, Dow Chemical, U.S.A., attention: Allan C. Wilcox (Aug. 12, 1976) (on file with *The Hastings Law Journal*).

4. CAL. HEALTH & SAFETY CODE § 40200 (West Supp. 1977).

5. 42 U.S.C.A. § 7410 (West Supp. 1977).

show that the plant's emissions would not interfere with the attainment or maintenance of national and state ambient air quality standards.⁶

Under similar circumstances, Southern California Edison Company announced on April 14, 1976, that it had removed from its financial and resource-planning schedule its proposed Kaiparowits Power Project in southern Utah. Although the coal resources of the western states represent a large, potential energy source, a series of uncertainties, including regulatory approvals, one environmental lawsuit, and the anticipation of another, made the project infeasible.⁷

This Article addresses the problems of major-facility industrial growth as they apply to environmental concerns. It is based on two premises: first, the pressure for industrial expansion, including public pressure from those who would directly benefit from such expansion, will continue; second, such additional industrial facilities will pollute.⁸ Accepting these premises, industrial siting becomes a problem of finding the best way of using available resources to maximize the quality of life. It is basically a question of trade-offs.

The decisions that result in such trade-offs revolve around the relative values placed on society's resources. Even though individuals will differ about such values, the ultimate goal of industrial siting should be to reflect in the decisions of public regulatory bodies the collective values of society regarding the use of the available resource pool. How best to achieve this goal is the subject of this Article.

In the late 1960s, the environmental movement awakened the public conscience to a deteriorating environmental situation. The flurry of legislation that followed has achieved laudable progress in conserving the environment,⁹ but the resultant regulatory labyrinth has made major industrial development a costly, risky, and sometimes impossible task.¹⁰ Meanwhile, the consumptive appetite of society continues to in-

6. Letter from Bay Area Air Pollution Control District to Western Division, Dow Chemical, U.S.A., attention: Allan C. Wilcox (Aug. 12, 1976) (on file with *The Hastings Law Journal*).

7. Southern California Edison Co., Press Release (Apr. 14, 1976).

8. McCarthy, *Introduction—The Evolution of Washington Siting Legislation*, 47 WASH. L. REV. 1, 5 (1971).

9. Alexander, *An Agenda for the New Administration III: It's Time for New Approaches to Pollution Control*, FORTUNE, Nov. 1976, at 128, 129.

10. ABA, *Development and the Environment: Legal Reforms to Facilitate Industrial Site Selection*, Final Report by the Special Committee on Environmental Law (1974) [hereinafter cited as ABA Final Report]; Case & Schoenbrod, *Electricity or the Environment: A Study of Public Regulation Without Public Control*, 61 CALIF. L. REV. 961 (1973); Luce, *Power for Tomorrow: The Siting Dilemma*, 25 REC. OF THE ASS'N OF THE BAR OF THE CITY OF N.Y. 13 (1970); Willrich, *The Energy-Environment Conflict: Siting Electric Power*

crease. One commentator, noting these conflicts between energy demand and power plant siting, stated: "[A] policy favoring the complete avoidance of environmental damage or 'zero impact,' is unreasonable, if we are to have electricity."¹¹

Recognizing the problem faced by utilities in finding suitable sites for major energy facilities, at least twenty-two states now have legislation intended to ease or coordinate the siting of such facilities.¹² Very few states, on the other hand, have taken up the challenge of comprehensive, industrial-siting legislation. The problem of redundant and often conflicting regulations at various levels of local, state, and federal government is severe. In the face of this problem, both industry representatives and conservationists have spoken out in favor of more rational and expeditious procedures.¹³

This Article will focus initially on the present siting requirements for a major industrial facility. After a brief review of these siting requirements, the regulatory obstacles to achieving those requirements will be discussed. Primary emphasis will be on the effect of environmental regulations on land-use decisions, the economic impact of these

Facilities, 58 VA. L. REV. 257 (1972); Wolpert, *Regressive Siting of Public Facilities*, 16 NAT. RESOURCES J. 103 (1976); Comment, *Industrial Site Selection: Existing Institutions and Proposals for Reform*, 55 NEB. L. REV. 440 (1976) (comment on the ABA Final Report, *supra*).

11. Willrich, *The Energy-Environment Conflict: Siting Electric Power Facilities*, 58 VA. L. REV. 257, 303 (1972).

12. ARIZ. REV. STAT. §§ 40-360 to 40-360.12 (1974 & Supp. 1977-1978); Utility Facility Environmental and Economic Protection Act, ARK. STAT. ANN. §§ 73-276 to 73-276.18 (Supp. 1977); CAL. PUB. RES. CODE §§ 25500-25542 (West 1977 & Supp. 1978); Public Utility Environmental Standards Act, CONN. GEN. STAT. §§ 16-50g to 16-50z (Supp. 1978); Florida Electrical Power Plant Siting Act, FLA. STAT. ANN. §§ 403.501-.517 (West Supp. 1978); The Power Plant Siting Act of 1974, KY. REV. STAT. §§ 278.020-.027 (1974 & Supp. 1976); Maryland Power Plant Siting Act of 1971, MD. NAT. RES. CODE ANN. §§ 3-301 to -307 (1974 & Supp. 1977); MASS. ANN. LAWS ch. 164, §§ 69K-69R (Michie/Law. Co-op 1977 & Supp. 1978); Minnesota Power Plant Siting Act, MINN. STAT. ANN. §§ 116C.51-.69 (West 1977 & Supp. 1978); Montana Major Facility Siting Act, MONT. REV. CODES ANN. §§ 70-801 to -829 (Supp. 1977); Utility Environmental Protection Act, NEV. REV. STAT. §§ 704-.820-.900 (1973 & Supp. 1977); N.H. REV. STAT. ANN. §§ 162-F:1 to :13 (1977); N.M. STAT. ANN. §§ 68-7-1 to -4 (1974); Siting of Major Steam Electric Generating Facilities Act, N.Y. PUB. SERV. LAW art. 8, §§ 140-149b (McKinney Supp. 1978); North Dakota Energy Conversion and Transmission Facility Siting Act, N.D. CENT. CODE §§ 49-22-01 to -22 (1978); OHIO REV. CODE ANN. § 4906.01-.99 (Page 1977); OR. REV. STAT. §§ 469.300-.992; Utility Facility Siting and Environmental Protection Act, S.C. CODE §§ 58-33-10 to -430 (1976); VT. STAT. ANN. tit. 30, § 248 (1970 & Supp. 1978); WASH. REV. CODE ANN §§ 80.50.010-.902 (Supp. 1977); WIS. STAT. ANN. § 196.491 (West Supp. 1978); Industrial Development Information and Siting Act, WYO. STAT. ANN. §§ 35-12-101 to -121 (1977).

13. Lundberg, *Industrial Siting and the Clean Air Act* (Aug. 26, 1976) (paper delivered at Energy and Public Lands Conference, Park City, Utah) [hereinafter cited as Lundberg]; Van Baalen, *Industrial Siting Legislation: The Wyoming Industrial Development Information and Siting Act—Advance or Retreat?*, 11 LAND & WATER L. REV. 27 (1976).

regulations on industry, and the ability of the individual resource agencies administering the regulations to balance in a meaningful way the socio-economic and environmental impacts of the proposed facility. Finally, various proposals for siting alternatives will be discussed, including statutes in effect in various jurisdictions.

Siting Requirements

In balancing environmental concerns against the perceived need for industrial expansion a number of siting factors must be considered. First, there must be a sufficiently large, contiguous land area of suitable topography to ensure plant security and to accommodate often massive structures. Second, the chosen site should have the transport capabilities for efficient receiving of raw materials and fuels and for distributing the manufactured products. If the site does not already meet that criterion, it must at least be capable, physically and logistically, of accommodating such transport requirements at an acceptable cost. That cost must be considered not only in dollar terms, but also with appropriate regard for environmental and land-use planning policies along the transport route to be constructed. Third, and closely related to transport requirements, is the need to be located along or near existing or planned utility corridors to ensure a steady, uninterrupted supply of needed fuel and power. In addition, to support the manufacturing process, ready availability of water supplies, wastewater disposal areas or access to wastewater treatment facilities, and solid waste disposal areas must be assured. Fourth, in many cases products can only be produced and sold competitively if the manufacturing facility is located near sources of raw materials, component products, or the principal markets for the finished products. Isolation of the industrial facility from important sources of supply or important markets may make the project economically infeasible because of the added transportation charges.

The foregoing is not an exhaustive list of the important factors in siting decisions, but simply indicates the complexity of plant siting problems, particularly in developed areas where vacant land may be scarce. Indeed, many other factors will enter into siting decisions, including availability of a work force, availability of housing and services for employees, financing considerations, and local public support.¹⁴

14. An excellent discussion of the factors necessary in planning a coal-fired generating facility is contained in Sager, *The Kaiparowits Experience: Siting of a Coal-Fired Plant*, in COAL CONVERSION—PRACTICAL AND LEGAL IMPLICATIONS 55 (PLI 1977).

With particular regard to the last-mentioned factor, one should not overlook whether public officials are amenable to the accommodation of a new facility. The nature and extent of the governmental requirements that are prerequisite to the location of a new industrial facility is one important indicator of local receptivity. To some extent, public support is the focus of this Article. That is, what, if anything, *should* a local, regional, or wider community be willing to do to accommodate industrial expansion? Can industry be permitted without an unhealthy compromise of other values? Recognizing that other siting and economic factors, including those mentioned above, may severely limit the siting options to only a few scattered locations within a single region or state, how can an assumed need for industrial growth be channeled by appropriate regulation into areas that can accommodate it without an unacceptable compromise of other values?

Environmental Limitations on Industrial Siting

The inventory of environmental statutes and regulations promulgated in recent years is staggering. The primary ones considered in this Article are, on the federal level, the Clean Air Act,¹⁵ the Federal Water Pollution Control Act Amendments of 1972¹⁶ (FWPCA), and the National Environmental Policy Act¹⁷(NEPA). On the state level there are many more. Using California as an example, one could refer to the Williamson Act¹⁸ (establishment of agricultural preserves), California Coastal Act of 1976,¹⁹ California Environmental Quality Act²⁰ (CEQA), and planning and zoning legislation.²¹

The difficulties that this labyrinth of legislation creates for both industrial and conservation interests are three-fold. First, by diffusing environmental considerations and responsibilities among numerous agencies, there is no incentive or opportunity for comprehensive resource planning. Second, such diffusion has created agencies with limited jurisdiction and vested interests in protecting one resource or serving limited constituencies. Such agencies find it difficult to accomplish the comprehensive balancing of socioeconomic and environmental factors required in a world of limited resources. Third, and most

15. 42 U.S.C.A. §§ 7401-7642 (West Supp. 1977).

16. 33 U.S.C.A. §§ 1251-1376 (West Supp. 1970-1977).

17. 42 U.S.C.A. §§ 4321-4367 (West 1977 & Supp. 1978).

18. CAL. GOV'T CODE §§ 51200-51295 (West 1966 & Supp. 1966-1977).

19. CAL. PUB. RES. CODE §§ 30000-30900 (West 1977).

20. CAL. PUB. RES. CODE §§ 21000-21176 (West 1977).

21. CAL. GOV'T CODE §§ 65800-65912 (West 1966 & Supp. 1966-1977).

important to industrial interests, the large number of permits required creates unacceptable time delays, uncertainty in the development process, and uncontrollable costs.

The following discussion highlights those aspects of recent environmental legislation which have created planning or procedural bottlenecks for industrial siting.

Clean Air Act

The Clean Air Act and its amendments²² affect the siting of industrial facilities in several ways. First, new sources are subject to preconstruction review requirements and must meet the national primary and secondary emissions limitations set forth in the applicable State Implementation Plan (SIP).²³ Assuming the emissions limitations are met, the new source review procedure for major industrial facilities will focus on whether, as to each of the designated pollutants emitted by the facility, the facility is located in an attainment or nonattainment area.²⁴

In the case of nonattainment areas, no permit to construct or operate may be granted unless the revised State Implementation Plan (meeting the requirements of the 1977 Clean Air Act Amendments) provides for an allowance for growth while assuring reasonable further progress toward attainment and the new sources will not result (individually or in the aggregate) in emissions exceeding the allowance. If the growth allowance is used up or none is provided, it must be shown that as a result of internal or external trade-offs a net decrease in emissions will result.²⁵ This policy is intended to allow for development in

22. 42 U.S.C.A. §§ 7401-7642 (West Supp. 1977).

23. 42 U.S.C.A. § 7410 (West Supp. 1977); 41 Fed. Reg. 55,528 (1976) (interpretative ruling).

24. An attainment area is an area presently complying with the National Ambient Air Quality Standards. Such areas are qualified for individual pollutants, and therefore an area may qualify as "attainment" for one pollutant but be a nonattainment area with regard to others.

25. 42 U.S.C.A. § 7503 (West Supp. 1977). The EPA's recently published Emission Offset Interpretative Ruling (draft on file with *The Hastings Law Journal*) further clarifies the offset provisions of the 1977 Clean Air Act Amendments. For example, the baseline for applying the offset requirement is the approved or promulgated SIP at the time the permit application is submitted; thus, control of existing sources beyond that required by the SIP at the time of a permit application can be used to offset emissions from new sources. Further, the Ruling permits the states to allow sources to "bank" emissions reductions made independently of or beyond the requirements of the Ruling for future use, so long as reasonable further progress toward attainment is achieved. The Ruling will remain in effect until July 1, 1979, at which time (except for relatively minor exceptions) it will be superseded by either a SIP revision meeting the requirements of the 1977 Clean Air Act Amendments, or a prohibition on growth if the SIP does not meet those requirements.

nonattainment areas where:

1. The new facility uses the best available technology in controlling emissions;²⁶ and

2. All existing major sources owned by the applicant in the same air quality control region as the proposed facility are in compliance with applicable emissions limitations, an approved compliance schedule, or any enforcement order issued under the Clean Air Act;²⁷ and

3. Emissions from other sources in the area of the proposed source are reduced so that the reduction in total emissions from existing and proposed sources represent reasonable progress toward attainment or maintenance of the applicable ambient air standards;²⁸ and

4. The emissions trade-offs will provide a positive, net air-quality benefit in the affected area.²⁹

Although as yet untested, the proposed trade-off provisions may present in some cases a viable method for harmonizing the competing demands of industry and environment. There remain, however, many unanswered questions.

Internal trade-offs, those between existing and proposed sources owned by the same entity, may encourage industry to make only minimal compliance with present standards so as to provide sources for trade-offs for future growth or to sell to other new sources. Similarly, external trade-offs, those between existing and proposed sources owned by different entities, may encounter substantial legal and administrative problems. In the comment period which EPA allowed on its proposed trade-off regulations, several states expressed concern regarding whether they could legally tighten emissions standards on one source in order to allow construction of new sources. They questioned whether, as a legal or practical matter, a free market or regulated system for effecting the necessary trade-offs could be established.³⁰ In addition,

26. 42 U.S.C.A. § 7503(2) (West Supp. 1977). However, under the EPA's August 1978 Emission Offset Interpretative Ruling (draft on file with *The Hastings Law Journal*) sources whose allowable emissions would be less than designated levels (50 tons per year, 1,000 pounds per day, 100 pounds per hour) after meeting the applicable SIP emission limit or new source performance standard would be exempt from the best available control technology requirements, although even such sources would use up part of the state's allocation for growth at the time such sources begin operation.

27. 42 U.S.C.A. § 7503(3) (West Supp. 1977).

28. 42 U.S.C.A. § 7503(4) (West Supp. 1977).

29. The EPA's August 1978 Emission Offset Interpretative Ruling (draft on file with *The Hastings Law Journal*) makes clear, however, that it is not enough that a "net air quality benefit" be found. In addition, the source must meet the lowest achievable emission rate (LAER) and the other conditions of the Ruling must be met.

30. 7 ENVIR. REP. (BNA) 1682, 1683-85 (1977).

the cooperation between competing industries promoted by these regulations could raise problems under federal and state antitrust laws.

The Clean Air Act Amendments of 1977 provide additional relief for industrial development in nonattainment areas.³¹ In nonattainment areas where it is demonstrated that the standards for carbon monoxide and oxidants cannot reasonably be met by the 1982 deadline, the attainment date for such areas may be postponed until December 31, 1987.³²

In areas where there is attainment of the national ambient air quality standards (NAAQS) for one or more of the designated pollutants, the prevention of significant deterioration (PSD) regulations will apply. The PSD provisions of the Clean Air Act Amendments of 1977³³ impose another land-use control on specified industrial facilities.³⁴ These regulations require virtually all areas of the country to be classified as class 1 (industrial growth prohibited), class 2 (growth allowed within rigid guidelines covering the amount and diffusion of pollutants), or class 3 (industrial growth constrained only by NAAQS). Under the Clean Air Act Amendments of 1977, all areas, except certain limited exempt areas, were required initially to be designated class 2.³⁵ They may be redesignated as class 1 or 3 by the state government³⁶ subject to compliance with the redesignation limitations and procedures set forth in the Act.

The amendments, as did the previous EPA regulations, permit additional new sources to be located in an area only if they will not cause the specified pollutant levels assigned to that area to be exceeded. The tolerable levels vary, depending on the class in which the site is located.

The effect of these nondeterioration provisions is to increase the necessity of pocket siting. In fact, the only way to site facilities in a class 2 area would be to site medium-sized facilities some distance apart so as to produce an even spread of the allowable level of pollutants over the area involved.³⁷ Even this may not be allowed if the emissions would cause the permissible increments to be exceeded in a nearby class 1 area. This idea of "pocket siting" industrial facilities is the epitome of poor planning and one of the wasteful side effects of the

31. 42 U.S.C.A. § 7503(1)(A) (West Supp. 1977).

32. 42 U.S.C.A. § 7502(a)(2) (West Supp. 1977).

33. 42 U.S.C.A. §§ 7470-7479, 7503(1)(B) (West Supp. 1977).

34. 42 U.S.C.A. § 7503 (West Supp. 1977).

35. 42 U.S.C.A. § 7472(b) (West Supp. 1977).

36. 42 U.S.C.A. § 7474(a) (West Supp. 1977).

37. Lundberg, *supra* note 13, at 15.

Clean Air Act. A major industrial facility involves a complex mix of resource uses. To base the siting decision upon the maximum preservation of only one of those resources, clean air, results in a waste of other resources. For example, an industrial facility sited away from population or transportation centers wastes those resources necessary to move people and goods into and out of the facility. It may also result in unwarranted and unwise residential development in the vicinity of the facility, as well as an increase in air pollutants due to increased vehicle use. At the very least, regulations which encourage pocket siting cause a blanket of minimally acceptable air to be spread over the whole region where there had once existed pockets of relatively clean air.

The necessity to pocket site could be mitigated by states classifying areas as class 1 and class 3, thus creating industrial regions and pristine areas. During the period of time that the nondeterioration provisions were EPA regulations, however, very few states chose to undertake the procedures necessary to reclassify areas.

Federal Water Pollution Control Act

The Federal Water Pollution Control Act Amendments of 1972³⁸ (FWPCA) entirely replaced the previous provisions of the Federal Water Pollution Control Act.³⁹ Of primary importance to those concerned with industrial siting is the system of federal permits and licenses for activities affecting United States waters contained in the FWPCA.

Under section 402⁴⁰ of the 1972 amendments, a national pollution discharge elimination system (NPDES) permit must be obtained for the discharge of any pollutant into any navigable water of the United States. This permit may be obtained directly from the Environmental Protection Agency (EPA),⁴¹ or in the instance where a state program (required to be adopted and submitted to the EPA under section 303⁴² of the Act) has been approved, from the state agency designated by the

38. 33 U.S.C. §§ 1251-1376 (Supp. V 1975). These amendments were subsequently revised in 1977. 33 U.S.C.A. §§ 1251-1376 (West Supp. 1970-1977).

39. See generally Ipsen & Raisch, *Enforcement under the Federal Water Pollution Control Act Amendments of 1972*, 9 LAND & WATER L. REV. 369 (1974); McThenia, *An Examination of the Federal Water Pollution Control Act Amendments of 1972*, 30 WASH. & LEE L. REV. 195 (1973); Comment, *The Federal Water Pollution Control Act Amendments of 1972*, 14 B.C. INDUS. & COM. L. REV. 672 (1973).

40. 33 U.S.C. § 1342 (Supp. V 1975).

41. 33 U.S.C. § 1342(a) (Supp. V 1975).

42. 33 U.S.C. § 1313 (Supp. V 1975).

state program.⁴³

Section 404 of the FWPCA grants to the Secretary of the Army, acting through the Chief of Engineers, the power to issue permits for the discharge of dredge or fill material into navigable waters at specified disposal sites.⁴⁴ Such permits are also subject to the state certification provisions of section 401. Besides the specific permits required from the state, EPA, or the Department of the Army, the EPA has issued numerous regulations governing the administration of activities under the Act.⁴⁵

As in the case of the emissions limitations under the Clean Air Act, the requirements of the NPDES have little effect in site location when considered in the abstract. Nevertheless, the existing quality of the receiving waters and the ability of these waters to accept any additional pollutants may well be important in site planning and location.

In addition to the foregoing permit requirements, the FWPCA also contains potentially far-reaching land-use controls in the form of area-wide waste treatment planning authorized under section 208⁴⁶ of

43. 33 U.S.C. § 1342(b) (Supp. V 1975). In instances where a state program has not been approved, then, as provided in § 401 of the Act, 33 U.S.C. § 1341 (Supp. V. 1975), no permit may be granted by the EPA for any activity resulting in any discharge into navigable waters unless and until the state in which the discharge originates certifies that the discharge will comply with the applicable provisions of § 301, 33 U.S.C. § 1311 (Supp. V 1975); § 302, 33 U.S.C. § 1312 (Supp. V 1975); § 306, 33 U.S.C. § 1316 (Supp. V 1975); and § 307, 33 U.S.C. § 1317 (Supp. V 1975), of the FWPCA regarding the discharge of particular pollutants.

44. 33 U.S.C. § 1344 (Supp. V 1975). The definition of navigable waters under the FWPCA, 33 U.S.C. § 1362(7) (Supp. V 1975), is more extensive than the Corps of Engineers' jurisdiction over navigable waters under §§ 9 and 10 of the Rivers and Harbors Act, 33 U.S.C. §§ 401, 403 (1970); 33 CFR § 209.120(d)(2)(1977). *Leslie Salt Co. v. Froehke*, No. 76-2414 (9th Cir. May 11, 1978). In addition, the Rivers and Harbors Act is limited to the regulation of obstructions or dredging, while the FWPCA covers any discharge. Consequently, in many cases, jurisdiction of the Corps of Engineers under both acts must be considered.

45. 40 C.F.R. § 110 (1977) (regulations on discharge of oil); 40 C.F.R. § 112 (1977) (regulations on oil pollution prevention); 40 C.F.R. § 120 (1977) (EPA regulations on water quality standards); 40 C.F.R. § 122 (1977) (EPA regulations on thermal discharges); 40 C.F.R. § 123 (1977) (regulations under § 401 on state certification of activities requiring a federal license or permit); 40 C.F.R. § 124 (1977) (EPA regulations on the state program elements necessary for participation in the NPDES program); 40 C.F.R. § 125 (1977) (EPA regulations on policies and procedures for NPDES permits); 40 C.F.R. § 128 (1977) (EPA pretreatment standards); 40 C.F.R. § 129 (1977) (EPA regulations on toxic pollutants effluent standards); 40 C.F.R. § 131 (1977) (EPA regulations on preparation of water quality management basin plans); 40 C.F.R. § 133 (1977) (EPA regulations on secondary treatment).

46. 33 U.S.C.A. § 1288 (West Supp. 1970-1977). That section provides for the appointment of regional operating agencies charged with the responsibility of developing region-wide, water-quality plans, which must include: (1) the identification of treatment works necessary to meet anticipated municipal and industrial waste treatment needs over a twenty-

the 1972 amendments. Subsection (e) of section 208 provides: "No permit under section 1342 of this title [NPDES permit] shall be issued for any point source which is in conflict with a plan approved pursuant to subsection (b) of this section."⁴⁷ Although section 208 area-wide planning has yet to have demonstrable effects on industrial siting,⁴⁸ in the event that such plans do become firmly established and implemented, they could drastically affect the availability of sites for industrial facilities.

In at least one jurisdiction, the San Francisco Bay Area, authority to compile the section 208 plan has been vested in a regional governing body not specifically associated with water-quality control.⁴⁹ This body is the Association of Bay Area Governments (ABAG). ABAG has now approved a far-reaching plan dealing with water-quality management, water-supply management, solid-waste management, and air-quality management. In each of these particular areas the plan contains specific policies and recommended actions to accomplish these policies. The ABAG plan has now been submitted to state and federal agencies for approval. If it is approved as the area section 208 plan, it will become the blueprint for development and environmental management in the San Francisco Bay Area.

The FWPCA provides for federal grants for the construction of treatment works to achieve compliance with the Act.⁵⁰ At least in California, however, the application of the grant program has created another obstacle to effective major-facility siting. The costs of any such treatment works must be certified to the EPA by the California State Water Resources Control Board (SWRCB).⁵¹ The regulations of the SWRCB require that all proposals for treatment works submitted for approval be "designed to accommodate normal, anticipated growth

year period; (2) the establishment of construction priorities for such treatment works; (3) the establishment of a regulatory program to accomplish the goals of the Act; (4) a process to identify nonpoint sources of pollution; (5) a process to identify mine-related sources of pollution; (6) a process to identify construction-related sources of pollution; (7) a process to identify, where appropriate, salt-water-intrusion problems; (8) a process to control the disposition of all residual waste generated in such area; and (9) a process to control the disposal of pollutants on land or in subsurface excavations within such area to protect ground and surface water quality.

47. 33 U.S.C.A. § 1288(e) (West Supp. 1970-1977).

48. Sanderson, *Is the Federal Water Pollution Control Act Really an Impediment to Energy Development in the West?* (Aug. 1976) (paper delivered at Energy and Public Lands Conference, Park City, Utah).

49. San Francisco Bay Regional Water Quality Control Board Res. No. 75-33 (May 15, 1975).

50. 33 U.S.C.A. §§ 1281-1287 (West Supp. 1970-1977).

51. CAL. WATER CODE § 13604 (West 1971).

and reasonable reserve capacity.”⁵² The amount of such capacity, however, is specifically limited to a ten-year period following the commencement of construction of the treatment facility, and in critical air basins, as designated by the State Air Resources Board, the growth rate is in most cases limited to the lowest possible fertility rate of the U.S. Census Bureau and zero net immigration.⁵³ The SWRCB regulations further preclude any provision for increased industrial flow.⁵⁴ By restricting the ability to build in expansion capacity, the effect of these regulations is to limit the ability of local or regional governments to plan for future development of major industrial facilities in urban areas.

In light of these FWPCA provisions, industries in some areas have adopted a zero-discharge or total-containment policy. Even such a total-containment policy may not be completely free from regulation in the future, because regulations to be issued under the Safe Drinking Water Act⁵⁵ or the provisions of a section 208 plan will regulate the effect of such containment facilities on the ground-water supply. Because the Safe Drinking Water Act regulates underground waters, in addition to navigable waters, its provisions may eventually dwarf the problems created by FWPCA. The EPA has published proposed regulations implementing the Safe Drinking Water Act's provisions but, as yet, these regulations have not been made final.⁵⁶

Other Federal Regulations

Although the Clean Air Act and the FWPCA are the most consistently noted federal restrictions on industrial development, they are only the tip of the iceberg as far as federal regulation is concerned.⁵⁷ Although other statutes and regulations generally do not have the pervasive effect on state land-use planning that was noted with the Clean

52. CAL. ADMIN. CODE § 2132 (1977).

53. CAL. ADMIN. CODE § 2133 (1977).

54. CAL. ADMIN. CODE § 2135 (1977).

55. 42 U.S.C. §§ 300f to 300j-9 (Supp. V 1975).

56. 40 C.F.R. 141 (1977); 41 Fed. Reg. 28,991 (1976) (proposed rules).

57. Other statutes or regulations which may affect the siting of a major industrial facility include: Noise Control Act of 1972, 42 U.S.C.A. §§ 4901-4918 (West 1977); Resource Conservation and Recovery Act of 1976, 42 U.S.C.A. §§ 6901-6987 (West 1977); Flood Disaster Protection Act of 1973, 87 Stat. 975 (codified in scattered sections of 12, 42 U.S.C.A.); Fish and Wildlife Coordination Act, 16 U.S.C. §§ 661-667e (1976); Marine Protection Research and Sanctuaries Act of 1972, 16 U.S.C. §§ 1431-1434 (1976), *as amended by* 33 U.S.C.A. §§ 1401-1444 (West Supp. 1970-1977); Historical and Archeological Data Preservation Act of 1974, 16 U.S.C. §§ 469-469j (1976) (as amended). Coastal Zone Management Act, 16 U.S.C. § 1451-1464 (1976) (as amended).

Air Act and the FWPCA, they do contribute to the regulatory morass which any potential development must traverse, and they may, in individual cases, effectively remove valuable lands otherwise available for industrial development. In a given instance the denial of any one permit may prohibit development.

Further, as an overlay on all federal regulation, there is the National Environmental Policy Act (NEPA).⁵⁸ NEPA adds another level of regulatory requirements, with its attendant inconvenience and delay. Although it does not directly restrict siting alternatives, its requirements for thorough disclosure of environmental impacts and the balancing of costs and benefits in issuing permits will often affect the siting process by ruling out or limiting potential sites on the basis of environmental factors.

By way of summation, the difficulties that federal environmental regulations pose are two-fold. First, in certain instances such as the Clean Air Act and FWPCA, they fragment the planning process and restrict land-use alternatives.⁵⁹ Second, by the sheer number of permits required, they create delay and uncertainty in the development process. When choosing between industrial siting alternatives, both of these difficulties must be addressed.

Compounding the problem of federal regulation, and outside the scope of this Article, is the question of state effectiveness in the face of the pervasive federal scheme. Federal regulations will, of course, preempt any inconsistent state statute. However, states may, under both the Clean Air Act and the FWPCA, impose more restrictive requirements. In instances where a state has imposed more restrictive requirements, the state should have at least some latitude in applying such standards. In addition, because the two major federal acts, the Clean Air Act and the FWPCA, are intended ultimately to be administered through state agencies, there may be some flexibility to allow the state agencies administering these federal laws to play an appropriate role in industrial siting legislation. More specifically, if an industrial siting agency were created to handle the siting of major industrial facilities, the SIP might be modified to designate the siting agency as the permit granting authority for such projects under the Clean Air Act. Similarly, such an agency could be designated to issue NPDES permits

58. 42 U.S.C.A. §§ 4321-4367 (West 1977 & Supp. 1978).

59. In some situations the opposite result can occur. This can happen when one agency has granted a permit and the other agencies follow suit relying on the first agency's judgment. The effect is similar to toppling a row of dominoes.

and to participate in the FWPCA section 208 planning under the FWPCA.

State and Local Regulation

The federal statutes are only one of several levels of regulatory controls with which a major industrial facility must contend. State and local regulations present a whole new set of bureaucracies.⁶⁰ Of course, the number and nature of controls at the state and local levels vary substantially from jurisdiction to jurisdiction. Rather than attempt to inventory the regulations which face developers around the country, this discussion will review briefly the various state and local permits which a proposed major industrial facility must obtain in California.

The most widely recognized control at the state and local level is the power of local authorities to zone and plan. All cities and counties in California are required to have a general plan⁶¹ containing certain mandatory elements.⁶² Before a property can be zoned for a particular use, the proposed zoning must be consistent with the general plan adopted by the respective, local legislative body. Should the proposed land-use zoning require an amendment to the general plan, public notice and hearings must be held before the appropriate planning commission and legislative body.⁶³ The amendment of a general plan also requires compliance with the California Environmental Quality Act (CEQA),⁶⁴ including the preparation of an environmental impact report (EIR)⁶⁵ or the filing of a negative declaration.⁶⁶ In addition, since the general plan is intended to be a long-term, policy document, no mandatory element of the plan may be amended more frequently than three times a year.⁶⁷

The siting of a major industrial facility may also require enactment or amendment of zoning designations, or the issuance of zoning

60. CAL. GOV'T CODE § 65860 (West Supp. 1966-1977). The consistency requirement is not applicable to charter cities. CAL. GOV'T CODE § 65803 (West 1966).

61. CAL. GOV'T CODE §§ 65300-65307 (West 1966 & Supp. 1966-1977); see Perry, *The Local "General Plan" in California*, 9 SAN DIEGO L. REV. 1 (1977).

62. CAL. GOV'T CODE § 65302 (West Supp. 1966-1977).

63. CAL. GOV'T CODE §§ 65355, 65356.1 (West 1966 & Supp. 1966-1967).

64. CAL. PUB. RES. CODE §§ 21000-21176 (West 1977 & Supp. 1978).

65. CAL. PUB. RES. CODE § 21151 (West 1977).

66. CAL. PUB. RES. CODE § 21064 (West 1977). A negative declaration is "a written statement briefly describing the reasons that a proposed project will not have a significant effect on the environment and does not require the preparation of an environmental impact report." *Id.*

67. CAL. GOV'T CODE § 65361 (West Supp. 1966-1977).

variances or conditional use permits. As previously noted, all of these actions must be consistent with the duly approved general plan.⁶⁸ All zoning changes require noticed public hearings before both the planning commission and the legislative body of the particular city or county.⁶⁹ In some instances a proposed facility will also require review by a county body known as the Local Agency Formation Commission (LAFCO) if development of the facility will require annexation to cities, creation of special districts, disincorporation of cities, consolidation of cities, or the formation of new communities.⁷⁰ In order to effect any of the specified changes in governmental agencies under the LAFCO's jurisdiction, an application must be submitted to the LAFCO and in most instances a public hearing must be conducted.⁷¹

Other planning and development agencies in California that are administered on a regional basis include the California Coastal Commission,⁷² the San Francisco Bay Conservation and Development Commission,⁷³ and the Tahoe Regional Planning Agency.⁷⁴

Any project undertaken by a state or local agency which may have a significant effect on the environment also will require the preparation and filing of an EIR pursuant to CEQA.⁷⁵ The term "project" for CEQA purposes is defined to include activities directly undertaken by a public agency, activities undertaken by persons receiving financial support from a public agency, and those activities involving the issuance of a lease, permit, license, certificate, or other entitlement for use.⁷⁶ Major industrial facilities almost by definition will have the potential for a significant effect on the environment and thus will require the preparation and filing of an EIR. A possible exception to this general rule arises when applicable resource agencies have placed restrictions on plant design and operations in an area that is not environmentally sensitive. In such a case even a major facility may be

68. CAL. GOV'T CODE § 65860 (West 1966 & Supp. 1966-1977); *Woodland Hills Residence Ass'n v. City Council of Los Angeles*, 44 Cal. App. 3d 825, 118 Cal. Rptr. 856 (1975). *Contra*, *Hawkins v. County of Marin*, 54 Cal. App. 3d 586, 126 Cal. Rptr. 754 (1976) (§ 65860 does not apply to conditional use permits).

69. CAL. GOV'T CODE §§ 65854-65856 (West 1966 & Supp. 1966-1977).

70. CAL. GOV'T CODE §§ 54773-54779.5 (West Supp. 1978).

71. CAL. GOV'T CODE §§ 54791, 54793 (West Supp. 1978).

72. CAL. PUB. RES. CODE §§ 30000-30900 (West 1977 & Supp. 1978).

73. CAL. GOV'T CODE §§ 66600-66661 (West 1966 & Supp. 1966-1977).

74. CAL. GOV'T CODE §§ 66800-66801 (West Supp. 1966-1977); NEV. REV. STAT. §§ 277.190-.220 (1969).

75. CAL. PUB. RES. CODE §§ 21100, 21151 (West 1977).

76. CAL. PUB. RES. CODE § 21065 (West 1977).

able to qualify for a negative declaration if it incorporates appropriate, environmentally sensitive, mitigation measures into its planning.

As noted at the outset of this Article,⁷⁷ the commitment of money and time necessary to obtain all of the permits required for a major industrial facility is substantial. In California one to two years (measured from the start of preparation of an EIR) would not be an unusual period of time, absent any major opposition, to obtain all or most of the required permits for a major industrial facility.⁷⁸ The most frustrating part of the whole process is that some permits may not be obtainable at all. If even one permit is lacking, no matter how minor, the development may be stopped in its tracks. Because the major part of the planning and design of a facility must often precede the application for permits, developers of such facilities are presently involved in high stakes gambling when they embark on any project. As with federal regulations, the problems created by state and local regulations which must be addressed in industrial siting legislation are fragmented planning, uncertainty, delay, and resource allocation.

Recent legislation in California has addressed the problem of delay. Assembly Bill 884⁷⁹ represents a major effort to speed up the processing of permits. The principal requirements of the law are:

1. Each state agency must have lists which specify in detail the information which will be required from any applicant for a development project.⁸⁰

2. Each "public agency" must determine in writing the completeness of an application within thirty calendar days of its receipt and transmit such determination to the applicant; and, if incomplete, the agency must indicate in such determination the manner in which the application can be made complete.⁸¹

3. Where a project requires approval by more than one public agency, the Office of Planning and Research, to the maximum extent possible, must consolidate hearings.⁸²

4. The "lead agency"⁸³ for a project will have the responsibility

77. See text accompanying notes 1-7 *supra*.

78. The California legislature recently enacted legislation designed to speed up the permit process. See text accompanying notes 79-89 *infra*.

79. Codified at CAL. GOV'T CODE §§ 65920-65957 (West Supp. 1966-1977); CAL. PUB. RES. CODE §§ 21080-21092 (West Supp. 1978).

80. CAL. GOV'T CODE § 65940 (West Supp. 1966-1977).

81. CAL. GOV'T CODE § 65943 (West Supp. 1966-1977).

82. CAL. GOV'T CODE § 65945 (West Supp. 1966-1977).

83. The lead agency is that agency which is determined to have the principal responsibility for carrying out or approving a project. CAL. PUB. RES. CODE § 21067 (West 1977).

for determining whether an EIR or a negative declaration will be necessary for any project subject to CEQA, and such determination will be final and conclusive on all persons, including all responsible agencies unless challenged in a prescribed legal action or proceeding.⁸⁴ In the case of projects involving the issuance of a lease, permit, license, certificate, or other entitlement for use, the new law also requires that such determination be made within forty-five days from the date on which an application for a project has been received and accepted as complete by the lead agency.⁸⁵ The lead agency must consult with all responsible agencies in making such determination and in preparation of an EIR.⁸⁶

5. When acting as the lead agency for projects involving the issuance of a lease, permit, license, certificate, or other entitlement for use, state and local agencies, by resolution or order, must establish time limits, not to exceed one year, for completing environmental impact reports and 105 days for negative declarations. Extensions are allowed in the case of "compelling circumstances" where the applicant consents.⁸⁷

6. An EIR will be conclusively presumed to meet the requirements of CEQA for purposes of its use by responsible agencies, unless either a supplemental report is required pursuant to Public Resources Code Section 21166 or a legal action or proceeding is commenced within the prescribed thirty-day statute of limitations.⁸⁸

7. Responsible state or local agencies are required to approve or disapprove a project within 180 days after the lead agency approves the project or within 180 days after the responsible agency accepts the application as complete, whichever is longer.⁸⁹

Although the law purports to establish maximum time limits for certifying EIRs and issuing permits, the agencies still have two ways to circumvent this procedure: (1) telling the applicant the application is not complete so that the relevant time periods do not start to run, and (2) extending the time limits with the "consent" of the applicant (which consent can, of course, be forced simply by a threat otherwise to deny the permit), although in the case of request for the applicant's

84. CAL. PUB. RES. CODE § 21080.1 (West Supp. 1978).

85. CAL. PUB. RES. CODE § 21080.2 (West Supp. 1978).

86. CAL. PUB. RES. CODE §§ 21080.3-.4 (West Supp. 1978).

87. CAL. PUB. RES. CODE §§ 21100.2, 21151.5 (West Supp. 1978).

88. CAL. PUB. RES. CODE § 21167.2 (West Supp. 1978).

89. CAL. GOV'T CODE § 65952 (West Supp. 1978).

consent the extension cannot exceed ninety days.⁹⁰ Finally it should be noted that, although AB 884 may be helpful in shortening the time required to obtain a decision on the permits required to site a facility, it does not address the problems of planning and resource allocation.

New Approaches

The permit proliferation evidenced in the previous section raises a serious question. Can we afford all of the protection we are getting? In light of what has often been a splintered and visceral approach to the problem of resource conservation and economic development, the goal of siting reform is the development of a system that can balance economic and environmental needs and that can act quickly and decisively. The effect of such a system would be to conserve our limited economic and environmental resources. The key to such a system is the creation of a master agency. This agency would weigh competing resource demands and formulate a balanced solution within a specified time frame.

From industry's perspective the master agency is the primary motivation for industrial siting reform.⁹¹ One of the often-stated complaints against the multitude of permits presently required is that they give those agencies with narrow interests significant and often arbitrary veto power over the siting process.

For the environmental movement, the one-stop process has the advantage of providing a vehicle for multi-resource conservation and planning on a large scale. On the other hand, the valid concern may be expressed that in the hard, balancing process which a siting master agency must undertake, the more easily quantifiable benefits associated with economic development may carry undue weight when balanced against the more intangible concerns of conserving the environment.

Although this Article advocates the master agency approach to siting reform, it should be pointed out that such an agency is not a uniformly accepted concept. A recent study by the Urban Land Institute stated:

It is important that all development decisions be made at the lowest level of government capable of dealing with the proposal involved. The removal of key facilities, such as power plants, from local control may prove essential. But the needless removal of responsibility from local government could, in effect, sound the death

90. CAL. GOV'T CODE § 65957 (West Supp. 1966-1977).

91. Rodgers, *Siting Power Plants in Washington State*, 47 WASH. L. REV. 9, 19 (1971).

knell for local planning, since authority to control the shape of a community could be lost.

The present investigation concluded that most industrial and other large scale development decisions can be made by local government rather than a state siting agency. Where problems arise because of the extraterritorial impact of particular kinds of development, they can be identified and treated appropriately, as under present control mechanisms. For example, air and water pollution problems are dealt with by federal or state agencies, rather than local agencies without removing the basic siting responsibilities of local government.⁹²

Expressing similar thoughts, Mr. S. Thomas Porter, a member of the advisory committee for the California Office of Planning and Research, stated: "I am worried about the potentiality of local governments being reduced to subservient arms of the State government. Home rule, which has been the strength of the California governmental system, may be permanently endangered by the adoption of these recommendations."⁹³

The coordination of local governmental interests with state or regional interests is a difficult problem inherent in siting legislation. The facilities which are the subject of this Article have, by definition, a multi-resource impact over a large region. Nevertheless, their most immediate impact will necessarily be on a community or other limited area. These communities should certainly have a substantial voice in the siting process, but they should not always be allowed to dictate the result. The following discussion will assume that a state or regional master agency is both necessary and desirable to accomplish the goals of siting legislation, but will attempt to be sensitive to the issue of local control in designing the procedural framework for such an agency.⁹⁴

Planning

The effectiveness of a master siting agency in maximizing the efficiency of resource use will depend to a large extent on the development of a statewide or regional, resource-conservation and industrial-development plan. As noted in the ABA Final Report, there is nothing novel in the advocacy of statewide or regional planning.⁹⁵ It is pro-

92. F. BOSSELMAN, D. FEURER & C. SIEMON, *THE PERMIT EXPLOSION—COORDINATION OF THE PROLIFERATION* 59-60 (Urban Land Institute 1976).

93. STATE OF CALIFORNIA, OFFICE OF PLANNING AND RESEARCH, *URBAN DEVELOPMENT STRATEGY FOR CALIFORNIA*, REVIEW DRAFT 70 (May 1977).

94. For an example of the conflicts inherent in the siting of major industrial facilities, see Deal, *The Durham Controversy: Energy Facility Siting and the Land Use Planning and Control Process*, 8 NAT. RESOURCES LAW. 437 (1975).

95. ABA Final Report, *supra* note 10, at 29-30.

vided for under the Federal Water Pollution Control Act,⁹⁶ the Coastal Zone Management Act of 1972,⁹⁷ the Clean Air Act Regulations,⁹⁸ and state statutes in numerous jurisdictions.⁹⁹ Siting legislation would attempt to coordinate all of this planning effort into a comprehensive resource plan.

The goal of such a planning process is easily stated:

The statewide plans should identify natural and historic values which should be preserved and protected against destruction from unregulated industrial development, identify and reserve areas for potential development as parks and recreational sites, and identify those areas most suitable for further commercial and industrial development—indicating the nature and type of industries best suited for particular areas. An inventory of available natural resources, along with proposals for the method and manner of using these resources for industrial development, should also be a part of the statewide plan. And, at least in a general way, the plan should reveal population centers and the availability of labor forces, transportation facilities, public utilities, community amenities, and other relevant considerations.¹⁰⁰

The development of such a plan, however, raises a series of practical and political problems.

To begin the planning process, goals and planning criteria must be articulated. Because they should be the embodiment of the values society places on individual resources, such goals and criteria perhaps should be established by the state legislature. It may be unrealistic, however, to expect a state legislature to do more than set the tone for industrial siting legislation. The actual work of providing specific, development goals and criteria can probably best be handled by an ad-

96. 33 U.S.C.A. § 1288 (West Supp. 1970-1977).

97. 16 U.S.C. §§ 1451-1464 (1976) (as amended).

98. 40 C.F.R. §§ 51.40-.63 (1977).

99. ALA. CODE ANN. tit. 22 § 28-11 (1975); ALAS. STAT. § 46.03.040 (1977); ARK. STAT. ANN. § 82-1904 (1976); COLO. REV. STAT. § 25-7-105 (1973); CONN. GEN. STAT. ANN. § 22a-8 (West 1975); FLA. STAT. ANN. § 403.061 (West 1973 & Supp. 1978); GA. CODE ANN. § 88-903 (1975 & Supp. 1977); HAWAII REV. STAT. § 341-2 (1976); ILL. ANN. STAT. ch. 111 1/2, § 1004 (Smith-Hurd 1977 & Supp. 1978); IND. CODE § 13-7-3-1 (Burns 1977); IOWA CODE ANN. § 455A.17 (West Supp. 1978); KAN. STAT. ANN. § 65-3003 (Cum. Supp. 1977); LA. REV. STAT. ANN. § 40-2204 (West 1977); MICH. COMP. LAWS § 336.13 (1975); MINN. STAT. ANN. § 115.03 (West 1977); MISS. CODE ANN. § 49-17-17 (Supp. 1977); NEB. REV. STAT. § 81-1504 (1976); NEV. REV. STAT. § 445.461 (1977); N.J. STAT. ANN. § 26:2c-8 (West Supp. 1978); N.Y. ENVIR. CONSERV. LAW § 3-0301 (McKinney 1973 & Supp. 1977); OHIO REV. CODE ANN. § 3403.04 (Page Supp. 1978); OKLA. STAT. ANN. tit. 63 § 2002 (West Supp. 1977); OR. REV. STAT. § 468.505 (1977); 35 PA. CONS. STAT. ANN. tit. 35 § 4004 (Purdon 1977); R.I. GEN. LAWS § 23-25-5 (Supp. 1977); S.C. CODE § 48-1-20 (1977); TENN. CODE ANN. § 53-3412 (1977); VA. CODE § 10-17.18 (1978); WASH. REV. CODE § 70.94.057 (1975).

100. ABA Final Report, *supra* note 10, at 30.

ministrative agency or special legislative commission. Such specific goals and criteria may then be ratified or modified by the legislature.

After resource priorities and goals have been developed, the next problem is how to implement the planning process. It may be possible to combine the development of planning criteria or priorities with the formulation of a development plan, or it may be necessary to have a two-step process with the actual plan following the designation of priorities.

The two-step process was followed in the case of the California Coastal Plan. The California Coastal Zone Conservation Act of 1972,¹⁰¹ adopted by initiative in 1972, established very general policy declarations and created the California Coastal Zone Conservation Commission and six regional commissions charged with developing a coastal plan.¹⁰² The California Coastal Plan, which was developed by the Commission, established criteria for the development and use of coastal areas and developed guidance for the implementation of such criteria. The Coastal Plan was presented to the legislature in 1976.¹⁰³ Although not all of the Commission's recommendations were adopted by the legislature, the plan served as a basis for the adoption by the legislature of relatively specific criteria for California's coastal resources and for the establishment of more long-term controls on coastal development. The newly enacted California Coastal Act of 1976 provides for the adoption of local coastal programs, each developed initially by local governmental bodies, in accordance with the specific criteria adopted by the legislature.¹⁰⁴ Such plans are to be reviewed and possibly modified at the regional and state levels. Once their plans are approved, local agencies can grant permits in conformity with the plans.¹⁰⁵

Another important consideration in designing the planning process is public involvement. As the ABA Final Report notes, "It is obvious that planning will be productive and effective only if it makes adequate provision for a consideration of all elements of the public

101. Former CAL. PUB. RES. CODE §§ 27000-27650 (repealed by initiative effective 1977).

102. Former CAL. PUB. RES. CODE §§ 27001, 27300-27304, 27320 (repealed by initiative effective 1977).

103. See S.B. 1277, 1975-76 Reg. Sess. (1976); S.B. 1579, 1975-76 Reg. Sess. (1976); A.B. 3076, 1975-76 Reg. Sess. (1976); A.B. 3200, 1975-76 Reg. Sess. (1976); A.B. 3210, 1975-76 Reg. Sess. (1976).

104. CAL. PUB. RES. CODE §§ 30000-30900 (West 1977 & Supp. 1978).

105. CAL. PUB. RES. CODE §§ 30600-30626 (West 1977).

interest.”¹⁰⁶ The ABA’s suggested method of implementing this public participation goal involves the division of each state into regions and the appointment of regional commissions to develop a plan after public hearings. On the basis of the input received at these public hearings, each regional commission would propose a regional plan to the state agency which, in turn, would coordinate the regional plans into a statewide plan.¹⁰⁷ Again, this procedure is similar to that described above for the California Coastal Zone Conservation Act of 1972¹⁰⁸ and the California Coastal Act of 1976.¹⁰⁹

The promulgation of regional development plans raises several problems. First, in states such as California, which already have extensive, mandatory planning by cities and counties, such regional plans will inevitably conflict with local plans. In resolving such conflicts, proponents of increased local control, whether advocating more or less development, will argue that a municipality, county, or other local governmental entity should have the right to use its resources to structure the lifestyle that its residents desire. On the other hand, the premise behind the concept of industrial siting reform is that local development of major industrial facilities has a regional or statewide impact. Thus, although it would seem advisable to leave maximum discretion with local agencies in the case of smaller facilities, the opposite is true in the case of major industrial facilities. In the latter situation the overriding state and regional interest must prevail, and local plans must be modified to conform with those for the respective region.

Conversely, it may be possible to allocate a portion of the benefits of major industrial facilities, primarily tax revenues, to municipalities or counties other than those in which the facility is located. Such allocation would correspond roughly with the lost benefits suffered by such areas because of restrictions on industrial development within their own jurisdictions. That is, if in the planning process it appears desirable to restrict industrial development in certain areas so as to preserve particular environmental resources, it may be necessary to provide some taxsharing funds to the affected areas to offset losses of revenue they may have suffered as a result of such restrictions. At the same time, however, the extra burdens which the planned sites for industrial facilities would have to bear because of those facilities, including in-

106. ABA Final Report, *supra* note 10, at 31.

107. *Id.* at 31-37.

108. Former CAL. PUB. RES. CODE §§ 27001-27650 (repealed by initiative effective 1977).

109. CAL. PUB. RES. CODE §§ 30000-30900 (West 1977 & Supp. 1978).

creased levels of pollution, population influx, housing pressures, and the like, would also deserve special recognition in determining any sharing formula.¹¹⁰

A second type of conflict may arise as a result of competing desires of various regions. For example, it may be desirable to site major facilities primarily inland to protect the environmentally sensitive coast from the burdens imposed by such facilities. On the other hand, inland areas may take issue with this policy in view of their own particular problems. In California, for example, the Association of California Water Agencies has taken the position that major energy facilities should be sited primarily on the coast to conserve the already scarce inland water supplies.¹¹¹

Another example of interregional conflict in California is the extent to which areas such as the Los Angeles basin should be allowed to continue to develop by importing natural resources such as water from other areas of the state. The resolution of these interregional conflicts will be difficult and never entirely satisfactory. They can probably be most efficiently handled, however, at the state planning level where, it is hoped, parochial interests will not be so prevalent.

As a practical matter it should be noted that it almost surely would be politically impossible to impose a major industrial facility, or to propose legislation which would allow such a facility to be imposed, on an area that does not want one.¹¹² Despite the statutory authority which a state may have to impose a facility on a given area, vehement local opposition will always provide a political veto to truly unpopular action. Thus, the only discretion left to the master siting agency would in effect be a veto power, or the power to impose restrictions on those areas which would like to have such a facility.

A third problem is the extent to which subsequent action by both the state and local governments must be in conformity with the statewide development plan. The *ABA Final Report* seems to suggest that such plans would only serve as a point of reference for the state siting agency and would have no binding effect on local governments.¹¹³ This distinction is made by designating the state function as "Basic

110. For a comprehensive effort to deal with these problems, see MINN. STAT. ANN. §§ 473-474.15 (West 1977). See also Note, *Minnesota's Metropolitan Fiscal Disparities Act—An Experiment in Tax Base Sharing*, 59 MINN. L. REV. 927 (1975).

111. ASSOCIATION OF CALIFORNIA WATER AGENCIES, *THE IMPACT OF POWER PLANT SITING ON CALIFORNIA'S WATER RESOURCES* (July 1976).

112. See Deal, *The Durham Controversy: Energy Facility Siting and the Land Use Planning and Control Process*, 8 NAT. RESOURCES LAW. 437 (1975).

113. ABA Final Report, *supra* note 10, at 31-32.

Planning," while the local governments would be left with the authority to promulgate specific regulatory controls.

This approach is reasonable when limited to the premise stated in the *ABA Final Report* that local governments are in the best position to implement zoning regulations, to require building and construction permits, and to require compliance with local ordinances and building costs.¹¹⁴ The implementation of local regulations, however, should not conflict with the state development plan. Where inconsistencies exist, the state plan must preempt any local actions. Thus, local zoning and planning decisions must be consistent with the regional or state development plan. The California Coastal Act of 1976 has recognized the necessity of controlling local actions in these areas and has required that all "zoning ordinances, zoning district maps, and, where necessary, other implementing actions"¹¹⁵ be submitted to the regional coastal commissions for certification that they are in conformity with previously approved, local coastal plans.

Final adoption of any state or regional development plan should be preceded by public hearings and notice to all interested or affected parties. The minimum scope of such notice and hearings will generally be mandated by state administrative procedure acts or by the requirements of due process. It may also be advisable to specify particular interest groups, such as environmental and industry groups or local government entities, which merit inclusion beyond the minimum standards. Since the formalities mandated by most administrative procedure acts may inhibit public participation, it might also be advisable first to hold a series of informal, public workshops at various localities within a planning region in order to obtain a wide variety of comments on siting and development problems. The final development plan, having been adopted in accordance with the state's administrative procedure act, would have the same force and effect as any other regulation adopted by an administrative agency.

The review draft of *Urban Development Strategy for California* prepared by the California Office of Planning and Research proposes a similar planning process:

The Office of Planning and Research shall sponsor legislation establishing an improved process for siting major industry. This process shall involve the following four steps: First, the State shall articulate its industrial siting policies. Second, local governments working through the COGs [Council of Governments] shall develop indus-

114. *Id.* at 33-34.

115. CAL. PUB. RES. CODE § 30513 (West 1977).

trial site plans which designate geographic areas suitable for various types of industry based on a general assessment of development impacts. Third, the State and its regulatory agencies shall "certify" those COG plans found consistent with State policy. Industries seeking to locate in ways consistent with certified plans should enjoy a substantially streamlined permit procedure since the major siting issues will have been debated before a specific development permit application is filed. Fourth, an evaluation of regional property tax sharing . . . shall be undertaken to fairly allocate the tax base advantages of new industrial growth.¹¹⁶

Once a state development plan is adopted, the emphasis in industrial siting switches to the siting agency and its implementation of that plan.¹¹⁷

Industrial Siting Legislation

Of prime concern is the scope of any proposed industrial siting legislation. Such legislation generally addresses the siting of those facilities that will have a multi-resource impact on a regional or statewide basis. Decisions regarding facilities which do not have such pervasive impacts can best be made by local governmental bodies and, in most cases, are not subject to the full range of permits previously described. It is difficult to define when the distinction should be made between local control and statewide or regional control.

Those states which have adopted some form of siting legislation have defined the coverage of such legislation by specific delineation of the types of facilities to which the particular act would apply. An example of this designation is found in the Wyoming Industrial Development Information and Siting Act which describes an industrial facility or facility covered by the Act as:

(A) Any energy generating and conversion plant:

(I) Designed for, or capable of, generating one hundred (100) megawatts of electricity or more . . . ;

116. STATE OF CALIFORNIA, OFFICE OF PLANNING AND RESEARCH, URBAN DEVELOPMENT STRATEGY FOR CALIFORNIA, REVIEW DRAFT 70, at 55 (May 1977).

117. An interesting question is whether an EIR would be required for the adoption of a state plan or any local plans. Presumably siting legislation by its nature would take into account environmental factors. Thus, if an EIR were required, it may be redundant. On the other hand, EIR's serve an agency review function which would be lost if they were eliminated. Furthermore, a cogent argument can be made under the current provisions of CEQA that an EIR would be required. See CAL. PUB. RES. CODE §§ 21002.1, 21003, 21082, 21082.1, 21100-21108, 21150-21155, 21160-21161 (West 1977 & Supp. 1978). Whether or not a formal EIR were to be required, however, the planning process would certainly have to take environmental considerations into account as a major part of the planning work. If it seems advisable to dispense with the requirements of an EIR for the siting plan, this could easily be specified in the enacting legislation.

(II) Designed for, or capable of, producing one hundred million (100,000,000) cubic feet of synthetic gas per day or more . . . ;

(III) Designed for, or capable of, producing fifty thousand (50,000) barrels of liquid hydrocarbon products per day or more by any extraction process . . . ;

(IV) Designed for, or capable of, enriching uranium minerals from U308 (yellow cake) in quantities exceeding five hundred (500) pounds of U308 per day.

(B) Any industrial facility with an estimated construction cost of at least fifty million dollars (\$50,000,000)¹¹⁸

The first question raised by the Wyoming Act is whether the quantitative figures specified are relevant criteria. Such figures are to some degree arbitrary. Consequently, they can always be the subject of argument. It does seem reasonable, however, that a facility of a certain magnitude, as measured in dollars or production capacity, will have the regional impact to which siting legislation is directed. On the other hand, facility distinction based on dollar amount alone or on specific production capacity would seem to exclude a number of other important criteria which may cause the facility to have a multi-resource impact on a regional or statewide basis.

A broader approach is taken by the *ABA Final Report* which suggests that a state be divided into areas of critical concern and that the industrial-siting agency be given jurisdiction over all development in these areas of critical, state concern.¹¹⁹ In addition, the *ABA Final Report* would give the industrial siting agency jurisdiction over all other nonresidential construction or development in the state.¹²⁰ The *ABA Final Report* recognizes that the extensive jurisdiction for the industrial siting agency described in the report would be overly broad for many types of facilities or development and accordingly provides for enumerated exemptions, such as single family dwellings. There are also abbreviated procedures for those projects which pose no significant threat to environmental values.¹²¹

The jurisdictional guidelines proposed by the *ABA Final Report* are overly broad, not only with regard to those facilities or developments that may pose little threat to environmental values, but also with

118. WYO. STAT. § 35-12-102 (1977). See also MONT. REV. CODES ANN. § 70-803 (Supp. 1977).

119. ABA Final Report, *supra* note 10, at 56-59; see FLA. STAT. ANN. § 380.05 (West 1974 & Supp. 1978); ME. REV. STAT. tit. 5, § 3310-3314 (West Supp. 1977); COUNCIL ON STATE GOVERNMENTS, CRITICAL AREA PROGRAMS IN LAND: STATE ALTERNATIVES FOR PLANNING AND MANAGEMENT (1975).

120. ABA Final Report, *supra* note 10, at 57.

121. *Id.* at 58.

regard to those facilities or developments which, although posing a substantial threat to environmental values, do so merely on a local basis. In such cases, it is more appropriate for local agencies charged with local land-use planning to make the decisions regarding such environmental values.¹²²

Numerous siting statutes have been directed at energy-related and energy-generating facilities regardless of their size.¹²³ The *ABA Final Report* notes that there may be other types of facilities such as oil-shale mining, processing pulp mills, chemical manufacturing, and tanneries, which, because of their nature, warrant designation as major industrial facilities regardless of their size and, hence, these too would be subject per se to siting regulation.¹²⁴

Another factor which may serve to identify the type of facilities appropriately handled by a siting agency is the proposed number of employees at the facility. Although this criterion has not been adopted in any siting legislation to date, it was considered at the committee stage of the Wyoming Act, and it has been noted by commentators as an important factor in identifying the full impact of any facility.¹²⁵ One of the initial versions of the Wyoming legislation provided that a facility would be included within the scope of the Act if it employed the equivalent of over one or one and one-half percent of the population of the county in which it was located, depending on the size of the county.¹²⁶ Land area covered by the proposed facility or the type of land used, for example prime agricultural land, may also be suitable factors for further determining whether state regulation of the siting of a facility is warranted.

In the final analysis, the scope of industrial siting legislation will depend largely on the particular needs and environment of the state in question. What may be appropriate for Wyoming, which faces particular problems in the area of energy facilities, may not be appropriate for the problems of industrial states.

122. As suggested in the ABA Final Report, *supra* note 10, at 33-35, it may be advantageous in the planning process to designate certain areas as areas of critical, state concern in which developments, even single-family dwellings, would be regulated. This, however, is beyond the scope of this Article.

123. See note 12 *supra*.

124. ABA Final Report, *supra* note 10, at 58.

125. See, e.g., Van Baalen, *Industrial Siting Legislation: The Wyoming Industrial Development Information and Siting Act—Advance or Retreat?*, 11 LAND & WATER L. REV. 27, 48-49 & n.77 (1976).

126. *Id.*

All of the above criteria should be considered in deciding what type of legislation would be appropriate for any particular state or region. Drafters of siting legislation will be faced with the problem that narrowly-drawn legislation will be unable to effect the necessary balancing of natural resources, while overly-broad legislation has the potential of creating an administrative quagmire even more unyielding than that presently existing.

The Siting Procedure

Once the resource and development plan is drawn and the type of facilities under its jurisdiction are delineated, the next problem is how the siting procedure should work. The "one-stop" concept advocated in this Article requires a single, master agency which can effectively grant all of the permits necessary at the state level for the siting of the proposed facility. The make-up of this siting body will be of prime importance in determining the immediate feasibility and long-term potential of siting legislation.

No statute can ensure the competence and integrity of individual members appointed to agencies or commissions through the political process, but legislative guidelines can aid in obtaining qualified members. A strong public demand for responsible decision-making by the siting agency can likewise aid in obtaining responsible political appointments. The agency should be objective and qualified, experienced, able to analyze and interpret environmental trends and information, and conscious of and responsive to the scientific, economic, social, aesthetic, and cultural needs of the community.¹²⁷ Broad legislative guidelines such as these, however, will not be particularly useful. Although they present noble attributes which ideally should be possessed by any person sitting in a position of public trust, the actual person chosen will likely be more a question of partisan judgment than nobility of character.

Any guidelines regarding the appointment of members to a siting agency should focus on the inevitable fact that the decisions of such an agency will be political ones and will have long-term effects on the economic and political vitality of the various regions involved.¹²⁸

127. ABA Final Report, *supra* note 10, at 43-45.

128. California presents a prime example of the potential effects of such difficult political decisions. The Los Angeles basin contains the major concentrations of population in the state, yet lacks several essential natural resources. In order to sustain itself, it must import those natural resources from other areas. In the case of water, it has, since the beginning of this century, made ever-increasing demands for water upon other areas of California and

Several alternatives to the "good, honest person" approach for the composition of a siting agency have been proposed. These proposals range from the interagency council, comprised of the heads of numerous existing state resource agencies,¹²⁹ to a vested-interest council, comprised of representatives of industry, environmental, and local and regional governmental groups.¹³⁰ The problem with either of these alternatives is that individuals appointed by reason of their affiliation with an existing agency or group may feel necessarily restricted in their ability to weigh alternatives and make independent judgments.

Thus, although the political-appointment alternative has serious drawbacks, it would seem to provide a better chance for obtaining objective qualities in the agency members. This may be particularly true if, as recommended by the *ABA Final Report*,¹³¹ appointments are made by the governor, with the advice and consent of the senior legislative body of the state, for staggered, fixed terms. In addition, it may be advisable to require some of the appointees to have particular, technical expertise which may be required by the siting agency, such as land-use planning, engineering, medical science, or law.¹³²

Any siting agency must necessarily have the ability and funds to establish a staff, promulgate regulations, and perform the functions required by the legislation. The level of funding required by the agency will vary, depending upon the relationship between the agency and the various state resource agencies. If the basic information gathering mechanisms, informational hearings, and policing activities are still to be handled by the already-existing, state resource agencies, the siting agency will only need sufficient staff and funding to promulgate regulations and review the recommendations and information which are gathered by the individual state agencies in the course of the siting

adjoining western states. In recent years, however, the increased development and corresponding demand for water in these other areas has resulted in serious regional conflicts. Note, *The Delta Water Rights Decision*, 2 *ECOLOGY L.Q.* 733, 735-36, 742-46 (1972). It can only be expected that with the increasing depletion of natural resources, California's present water allocation problems will affect the allocation of other natural resources. Decisions by a siting agency will create demands for natural resources in the areas in which development occurs and will produce increased economic vitality in such areas. If a siting agency is to function efficiently, the reality of the potential political power resulting from making these decisions must be faced.

129. See, e.g., WASH. REV. CODE § 80.50.030 (Supp. 1977).

130. ABA Final Report, *supra* note 10, at 44-45.

131. *Id.* at 44.

132. Such a requirement of technical expertise is found in the California legislation on the State Energy Resources and Development Commission. CAL. PUB. RES. CODE § 25201 (West 1977).

process. If it becomes desirable for the siting agency to develop independent regulatory or investigatory abilities, a proportionate increase in funding would be required.

A substantial portion of the funding for the siting agency could be provided by application fees. It might be appropriate to set such application fees at the approximate level of the actual cost necessary to process the application and prepare any environmental documents which would be required.¹³³ States may also choose to allow the siting agency to hire consultants for a particular project, with the cost being passed directly through to the applicant. This procedure is permitted under the California Environmental Quality Act.¹³⁴

Master Application

The functional tool of the siting agency is the master application. The form of such an application may fall anywhere along a spectrum from thoroughly complete to cursory. A comprehensive application would require a description of the specific operational characteristics and requirements of the proposed facility, the characteristics of the proposed site and surrounding environs, and detailed data regarding the environmental impact of the proposed development. Such a form would potentially comprise the bulk of the necessary data for the formulation of an EIR required by state environmental laws, such as the California Environmental Quality Act,¹³⁵ or by the National Environmental Policy Act.¹³⁶ In addition, the application could contain all additional information necessary to evaluate the total, resource impact of the facility and allow the agency to make an informed decision consistent with the resource conservation purposes and criteria of the siting legislation. The form of such an application could follow closely the resource guidelines developed in the planning process. In order to ensure that the application contains all of the necessary information, the application for any single facility probably would require extensive consultation between the siting-agency staff and the applicant.¹³⁷

133. It would appear that Montana and Washington have already adopted procedures akin to this proposal. MONT. REV. CODES ANN. § 70-806(2)(a) (1977); WASH. REV. CODE ANN. § 80.50.071(1) (Supp. 1978).

134. California Environmental Quality Act, CAL. PUB. RES. CODE §§ 21082.1, 21089 (West 1977).

135. CAL. PUB. RES. CODE §§ 21000-21176 (West 1977 & Supp. 1978).

136. 42 U.S.C.A. §§ 4321-4367 (West 1977 & Supp. 1978). Note that this may be a "supplemental" report if planning and related issues were already covered in a master EIR done at the development plan stage.

137. *But see* WASH. REV. CODE § 80.50.071 (1)(a) (Supp. 1977) which allows the siting

Since the preparation of a comprehensive application form would require the applicant industry and the siting agency to carry out a great deal of time-consuming, expensive information gathering and planning prior to any formal review by the siting agency, several states have set up a two-step application process.¹³⁸ This two-step approach requires that a preliminary application be submitted, outlining in general terms the nature of the proposed facility. The agency then undertakes hearings and information gathering, including the referral of specific questions to resource agencies, to make a preliminary determination of the site feasibility and the compatibility of the project with the resource-conservation goals of siting legislation. The advantage of this approach is that the preliminary inquiries test the attitudes of both the siting agency and the community toward the proposed facility without involving a great deal of unnecessary expense. If, on the basis of the preliminary application, the project appears feasible and consistent with siting goals, a more comprehensive application would be prepared.

In the course of preparing the master application, the siting agency would necessarily develop substantial information in the areas of the facility's specifications and requirements, as well as characteristics of the proposed site and the surrounding area. Ideally, such information would be prepared in a manner and form in compliance with the National Environmental Policy Act or similar state legislation. It should deal not only with the environmental impact of the proposed facility but also with the corresponding social and economic impact of the facility. These considerations are necessary to satisfy the resource conservation objectives of industrial siting legislation.

Role of State Agencies

The authors believe that a principal purpose of industrial siting legislation is to remove from the jurisdiction of individual state resource agencies, by way of master application forms and specific pre-emption, a degree of the discretion that those agencies previously exercised in the siting process. It is not, however, the aim of siting legislation to emasculate such agencies. To do so would be to lose a

agency to hire an independent consultant empowered to investigate all matters necessary to an adequate evaluation of the environmental consequences of a proposed site. This avoids the danger that consultation between the applicant and the agency staff could influence the outcome.

138. See, e.g., WASH. REV. CODE ANN. §§ 80.50.175(2), 80.50.175(3) (Supp. 1977); WYO. STAT. § 35-502.82 (Supp. 1975 & Interim Supp. 1977).

valuable resource of knowledge and experience. The interaction between the siting agency and individual resource agencies is critical and should be retained.

Presently existing industrial siting legislation and the industrial-siting legislation proposed in the *ABA Final Report* present two broad alternatives with which to resolve the question of resource-agency participation. The first alternative, set forth in the *ABA Final Report*,¹³⁹ gives the resource agencies the right to have input and comment in the siting process but reserves to the siting agency any permit jurisdiction over the subject facilities.

The *ABA Final Report* proposes that, in proceedings before the siting agency, resource agencies and units of local government, which ordinarily would have jurisdiction over the proposed facility were it not for the siting agency's preemption, will be required to report to the siting agency their recommendations with respect to the facility and the permits.¹⁴⁰ For example, the California State Energy Resources Conservation and Development Act,¹⁴¹ which is limited in scope to the siting of power plants, states:

The issuance of a certificate by the commission shall be in lieu of any permit, certificate, or similar document required by any state, local or regional agency, or federal agency to the extent permitted by federal law, for such use of the site and related facilities, and shall supersede any applicable statute, ordinance, or regulation of any state, local or regional agency, or federal agency to the extent permitted by federal law.¹⁴²

The Act provides specifically for the comments and recommendations of the Public Utilities Commission and the California Coastal Commission in some circumstances.¹⁴³ In addition, the Act provides that the Energy Commission shall not certify any facility that does not conform with applicable state, local, or regional ordinances unless a determination is made that such facility is required "for public convenience and necessity and that there are not more prudent and feasible means of achieving such public convenience and necessity."¹⁴⁴

The California statute, however, does not provide any specific procedure for the implementation of this section. The statute does not specify whether the determination of a facility's compliance with local

139. *ABA Final Report*, *supra* note 10, at 46-47.

140. *Id.*

141. CAL. PUB. RES. CODE §§ 25000-25968 (West 1977 & Supp. 1978).

142. CAL. PUB. RES. CODE § 25500 (West 1977).

143. CAL. PUB. RES. CODE §§ 25506.5, 25507 (West 1977 & Supp. 1978).

144. CAL. PUB. RES. CODE § 25525 (West 1977).

regulations shall be made by the siting agency or the respective local permitting agency. It would seem most logical that the local agency should make this determination because it would be interpreting its own regulations.¹⁴⁵ Allowing the local agency to determine compliance also may be beneficial because it would require the siting agency to make the "public convenience and necessity" finding to justify non-complying projects.¹⁴⁶

Similar to the California statute, the Montana Major Facility Siting Act¹⁴⁷ states that the siting commission's certificate shall supersede any other state permitting powers necessary for the construction, operation, or maintenance of the certified facility.¹⁴⁸ The major exception to this broad grant of authority is that the state agencies with responsibility for air-quality and water-quality standards retain their authority to determine facility compliance with state and federal standards.¹⁴⁹ This reservation of authority may seriously weaken the force of the commission's certification, since the air-quality and water-quality matters are normally crucial considerations in the siting of any major facility. In future siting legislation it may be possible to avoid this problem by amending the state implementation plans under both the Clean Air Act and FWPCA to designate the siting agency as having ultimate permitting authority for the facilities in question.

The second alternative is exemplified by a siting statute already existing in Washington.¹⁵⁰ This statute, a type of clearing-house statute, has a single application procedure but reserves to the state resource agencies the ultimate permitting power. A negative decision by any resource agency having permitting authority would preclude construction of the proposed facility. One obvious drawback of the Washington clearinghouse statute is that it provides no incentive, other than a single application, to use the major facility siting procedure. Indeed:

Experience with the Washington ECPA [Washington Environmental Coordination Procedures Act] has not been entirely encouraging, due apparently to the way the program is structured. The developer's

145. *But see* WASH. REV. CODE § 80.50.090(2) (Supp. 1977), which provides that the siting agency independent from input of local agencies shall make this determination.

146. It should also be noted that the California statute is similar in many other respects to the legislative proposals suggested by this Article.

147. MONT. REV. CODES ANN. §§ 70-801 to -829 (Supp. 1977).

148. MONT. REV. CODES ANN. § 70-817 (Supp. 1977).

149. MONT. REV. CODES ANN. § 70-810(h) (Supp. 1977).

150. Environmental Coordination Procedures Act, WASH. REV. CODE ANN. §§ 90.62.010-.908 (Supp. 1977). For an analysis of the act prior to the 1977 amendments, see Corker & Elliott, *The Environmental Coordination Procedures Act of 1973*, 49 WASH. L. REV. 463 (1974).

participation is *voluntary*, and relatively few projects have utilized the process. Where working relationships have been built up over the years with agency officials, developers have tended to take advantage of those relationships by securing permits in the traditional manner rather than proceeding through the joint hearing process. Developers are also reluctant to expose some permits to public hearings, when the traditional process would allow their issuance without hearings. There is evidence that agency decisionmakers who are not enthusiastic about the coordinated hearings procedure encourage developers to avoid it. Furthermore, the statute permits the hearing panel to establish a time limit for agency decisions, but time limits are not enforced.¹⁵¹

The major drawback in the Washington clearinghouse statute, from the points of view of both the developer and the conservationist, is the inevitably fragmented, decision-making process that results from multiple agencies having life or death control over a project. This type of clearinghouse statute can do little to alleviate the problems of delay and uncertainty that are prevalent in the present system.

It would seem that the most advantageous way to maximize the experience and expertise of individual, state resource agencies, while at the same time reserving to the siting agency ultimate decision-making authority, would be to delegate to such resource agencies the responsibility of conducting public hearings and staff inquiry into that aspect of siting the proposed facility in which the particular agency has expertise. Forthcoming from this resource-agency inquiry would be recommendations to the siting agency regarding the appropriateness of the proposed facility. Such recommendations would be followed by the siting agency except in instances where, in the discretion of the siting agency and after specific findings, the siting agency finds that the resource agency's recommendation would be inconsistent with its adopted goals and objectives. It would also seem appropriate for the monitoring and enforcement of activities, after the siting decision, to continue to be the responsibility of the individual resource agencies. The expenses incurred by the resource agencies in performing such functions could be offset by the siting agency's allocating a portion of the application fee to go to the resource agency.¹⁵²

151. F. BOSSELMAN, D. FEURER & C. SIEMON, *THE PERMIT EXPLOSION — COORDINATION OF THE PROLIFERATION* 21-22 (Urban Land Institute 1976). See also ULI, *ENVIRONMENTAL COMMENT* 4 (May 1976).

152. As an example of this allocation of funds, see CAL. PUB. RES. CODE § 25538 (West 1977).

Participation in the Siting Process

An equally important aspect of siting legislation is deciding who should participate in the process. The simplest answer is that all interested persons should have a chance to be heard before any decision is made. In this context, the phrase "interested person" has been interpreted by California courts to mean a person or entity who has a legal interest affected directly or indirectly by the action or a person who may be potentially affected by the action.¹⁵³

It would seem logical that for purposes of the siting process, similar standards should apply to persons who seek to participate in the course of the siting process. This definition of "interested persons," however, would probably include any citizen of the state, at least as far as the planning process is concerned, and may make the administration of siting legislation ponderous. This risk does not seem as substantial, however, as the possibility of excluding persons with a valid interest. Reasonable rules governing public participation consistent with the need to avoid undue delays and irrelevant or repetitive testimony could be adopted by the planning body.

It would also seem logical that certain persons or entities specifically be included in the siting process. Certainly all agencies and local-government entities who normally would have had permit power over the project but for the siting legislation should be included. In addition, it may be proper to include certain special-interest groups. Contiguous land owners or land owners within a specified radius of the proposed facility should also be included as participants before the siting agency. Finally, some type of general notice to the public of the siting proceedings should be given by publication, and interested members of the public should be allowed to participate.

Conclusion

Industrial siting is still in its formative stage. Very few states have adopted siting legislation other than that for electrical generating facilities, and no major industrial state has yet enacted comprehensive siting legislation. Even in those states where legislation has passed, in most cases it has been in effect a short period of time. There is little experience on which to base a discussion of the practical aspects of such legislation. Nevertheless, some form of siting legislation in major industrial states seems inevitable. Without such legislation, the sub-

153. *American Friends Serv. Comm. v. Procunier*, 33 Cal. App. 3d 252, 109 Cal. Rptr. 22 (1973).

stantial gains made by the environmental movement in the last decade may be wiped out by a backlash of public opinion caused by the tremendous costs of present standards and the long delays in obtaining permits. Alternatively, development interests and the public will be forced to bear the cost of environmental regulations which are, at least in some cases, disproportionate to the benefits realized.

Regardless of the form industrial siting legislation may take, however, it will not solve all of the problems inherent in the conflict between industrial expansion and environmental preservation. Responsible siting legislation will provide at the least a forum in which such conflicts can be debated, and such debate can produce reasonable compromise.

Part 6
Land Use Control

BEYOND THE CITY LIMITS: REGIONAL EQUITY AS AN EMERGING ISSUE†

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During the 1960's and the 1970's, the singleminded pursuit of growth for its own sake was drawn into question in many communities across the country. Countering a two-hundred year history of equating growth directly with progress, communities began to address the implications of unrestrained growth on the protection of natural resources, the ability of local governments to meet demands for public services while preserving fiscal stability, and the maintenance or enhancement of the quality of life for community residents. Increasingly, managed growth—affirmatively guiding development

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in an integrated and systematic manner to achieve various community objectives—became a basic approach to local planning and decisionmaking.¹

Simultaneously, there was a developing awareness that many growth problems transcend political boundaries and, thus, exceed the capacity of any single unit of government to develop effective solutions. The regional council, formed to deal with multijurisdictional problems and issues, evolved as one solution to fill this institutional gap. Defined as a substate public organization encompassing a multijurisdictional regional community that includes local government representatives on its governing body, the regional council concept has spread rapidly across the country since the early 1960's. At the start of 1978, there were 655 regional councils in the United States, located in forty-nine of the fifty states.²

While both local growth management and regional councils attempt to mitigate the impacts of unrestrained growth, their courses have not yet converged. Local growth management programs often ignore the regional effects of their actions, and regional councils often duck the volatile issues involved in guiding growth. It is, however, increasingly clear that the two efforts must ultimately be linked to achieve effective development of the economic, environmental, and human resources of our urban areas.

Our thesis is that this linkage depends upon definition and achievement of *regional equity*: fairness in the distribution of, and opportunities for access to, developed urban land. Along with environmental protection and fiscal efficiency, regional equity is a necessary element of an effective and responsible regional growth policy. One of the genuine new ideas in recent times, the concept of regional equity is being incorporated into federal and state policy statements, court decisions, and progressive planning practices. We will use illustrations from each of these areas to outline a working definition of regional equity, and will show how it is being pursued.

1. For a comprehensive treatment of growth management, see D. GODSCHALK, D. BROWER, L. MCBENNETT & B. VESTAL, *CONSTITUTIONAL ISSUES OF GROWTH MANAGEMENT* (1977) [hereinafter cited as *CONSTITUTIONAL ISSUES*].

2. NATIONAL ASSOCIATION OF REGIONAL COUNCILS, *DIRECTORY '78* (1977). There are no regional councils in Hawaii, perhaps partly due to that state's unique state-wide planning efforts. See HAWAII REV. STAT. § 205-1 (Supp. 1974).

I. FEDERAL AND STATE POLICY & REGIONAL EQUITY

In recent years federal policy, as reflected in legislative and administrative requirements, has been the primary catalyst for institutionalizing a regional perspective. In early 1964, only five federal programs had planning requirements for an area-wide perspective.³ As of 1972, there were at least twenty-four such programs, representing approximately \$8.6 billion in federal aid expenditures.⁴ By 1976 there were thirty-two federal programs supporting substate regional activities.⁵

These programs reflect federal recognition that effective management of urban facilities and natural resources must transcend political boundaries. For example, HUD's planning program⁶ under section 701 of the Housing Act of 1954⁷ now requires areawide comprehensive planning that includes, at a minimum, adopted and certifiable housing and land use elements.⁸ Another example is section 208 of the Environmental Protection Agency's Water Quality Management Planning Program,⁹ which implements the objective of

3. See, e.g., HUD Section 701 Areawide Comprehensive Planning Grants, 40 U.S.C. § 461 (Supp. V 1975); HUD Open Space Grants, 42 U.S.C. § 3535(d) (1970); Urban Mass Transportation Planning Grants, 49 U.S.C. § 1604 (1970).

4. ADVISORY COMMISSION ON INTERGOVERNMENTAL RELATIONS, REGIONAL DECISION MAKING: NEW STRATEGIES FOR SUBSTATE DISTRICTS 168-70 (1974) [hereinafter cited as REGIONAL DECISION MAKING]. For examples, see notes 9-14 and 16-20 *infra*.

5. ADVISORY COMMISSION ON INTERGOVERNMENTAL RELATIONS, REGIONALISM REVISITED: RECENT AREAWIDE AND LOCAL RESPONSES 11-19 (1977) [hereinafter cited as REGIONALISM REVISITED]. E.g., Section 8 Housing, 42 U.S.C. § 1437(f) (Supp. V 1975); Community Development Block Grants, 42 U.S.C. § 5303 (Supp. V 1975); Coastal Zone Management Program, 16 U.S.C. §§ 1451-1463 (Supp. V 1975). See also note 3 *supra* and notes 9-14, 16-20 *infra*.

6. 24 C.F.R. § 600 (1977).

7. 40 U.S.C. § 461 (Supp. V 1975). 1974 amendments to the Act sought spatial deconcentration of lower income groups. The Act requires localities to plan for the housing needs of lower income persons "expected to reside in the community." 42 U.S.C. § 5304(a)(4)(A) (Supp. V 1975). Regulations governing this subject appear at 24 C.F.R. § 891.502 (1976). A recent case relied on this provision to challenge the award of HUD grants to suburbs that failed to set realistic housing goals. *City of Hartford v. Hills*, 408 F. Supp. 889 (D. Conn. 1976).

The Fair Housing Act (Title VIII of the Civil Rights Act) states a national policy of providing fair housing throughout the United States. 42 U.S.C. § 3601 (1970). One exclusionary zoning case has been decided on the basis of this Act. *United States v. City of Black Jack*, 508 F.2d 1179 (8th Cir. 1974), *cert. denied*, 422 U.S. 1042 (1975) (Court held Black Jack's actions were racially discriminatory).

8. 40 U.S.C. § 461 (Supp. V 1975).

9. 40 C.F.R. § 131 (1976).

the Water Pollution Control Act Amendments of 1972¹⁰ to restore the chemical, physical, and biological integrity of the nation's water by 1985 through facilitating the development and implementation of areawide waste treatment management plans.¹¹ Additional areawide programs address urban development,¹² rural development,¹³ economic development,¹⁴ and the provision of public services and facilities, including open space,¹⁵ transportation,¹⁶ solid waste,¹⁷ health,¹⁸ manpower,¹⁹ and law enforcement.²⁰

The federal government has served as the pre-eminent force urging local governments to adopt a regional perspective. Yet an analysis of these federal programs, conducted by the Advisory Commission on Intergovernmental Relations (ACIR) in 1971, as part of a comprehensive study of the emergence of regionalism,²¹ indicated that the significant "... overlap, inconsistencies, and absence of concerted purpose and policy among the two dozen federal programs with an areawide thrust"²² often hindered the development of a comprehensive regional perspective and inhibited the major institutional reform

10. 33 U.S.C. § 1251 (Supp. V 1975).

11. *Id.* § 1251(a).

12. Title I of the Housing and Community Development Act of 1974, 42 U.S.C. § 5304(b) (Supp. V 1975); 24 C.F.R. §§ 570.404, 891.501 (1977) (Areawide Housing Opportunity Plans).

13. *E.g.*, Agricultural Act of 1970, 42 U.S.C. § 3122(c) (1970); Consolidated Farmers Home Administration Act of 1961, 7 U.S.C. § 1926(a)(11) (1970).

14. Public Works and Development Act of 1965, 42 U.S.C. § 3121 (1970); 13 C.F.R. § 305.1 (1977).

15. Housing and Urban Development Act, § 7(d), 42 U.S.C. § 1500(d) (1970); 24 C.F.R. §§ 540-541 (1977).

16. Projects of the Federal Highway Administration and the Urban Mass Transportation Administration must satisfy the "3-C" planning process, which is a "continuing, cooperative, and comprehensive transportation process that results in plans and programs consistent with the comprehensively planned development of the [appropriate] urbanized area[s]." 23 C.F.R. § 450.100 (1976). The "3-C" regulations were issued to comply with the Federal Highway Act, 23 U.S.C. § 134 (1970) and the Urban Mass Transportation Act, 49 U.S.C. §§ 1602(a)(2), 1603(a), 1604(g)(1) (Supp. V 1975).

17. Resource Recovery Act of 1970, 42 U.S.C. § 3254a(b) (1970).

18. Comprehensive Health Planning and Assistance Act, 42 U.S.C. § 246(b) (1970); 42 C.F.R. § 51.4(c)(6) (1976); Public Health Service Act, 42 U.S.C. §§ 3001-3003 (1970).

19. Manpower Act, 42 U.S.C. § 2610a (1970); Comprehensive Employment and Training Act, 29 U.S.C. § 811 (1970).

20. Omnibus Crime Control Act of 1970, 42 U.S.C. §§ 3722-3727, 3732-3737 (1970).

21. REGIONAL DECISION MAKING, *supra* note 3, at i.

22. *Id.* at 347.

necessary to ensure that a single organization could serve as an effective and responsible regional decisionmaker. ACIR's three part strategy—strengthened regional councils, local government modernization and reorganization, and functional assignment of responsibilities between the two levels—was designed to overcome the confusion and inconsistencies that characterized regionalism through its early years.²³

In a 1972 survey of mayors and county executives, ACIR found that political traditions opposing metropolitan/regional government were the most significant barriers to expanded regional action on local and areawide problems.²⁴ In response, ACIR advocated a federated form of regional institution²⁵ in which functions²⁶ are assigned on the basis of economic efficiency, equity, political accountability and administrative effectiveness.²⁷

Economic Efficiency, according to ACIR,²⁸ dictates that functions should be assigned to jurisdictions that a) are large enough to realize economies of scale and small enough not to incur diseconomies of scale; b) are willing to provide alternative service offerings (e.g., sewer, water, or school facilities, police protection, health care programs) at a price range and level of effectiveness acceptable to local citizenry; and c) adopt pricing policies for their functions when appropriate.

*Equity*²⁹ suggests that functions should be assigned to jurisdictions that a) are large enough to absorb all costs and benefits of a function or are willing to compensate other jurisdictions for the service costs

23. REGIONALISM REVISITED, *supra* note 4, at 4-5.

24. REGIONAL DECISION MAKING, *supra* note 3, at 113-38.

25. Federated systems have a two-tier organization in which the upper level exercises some control over the lower level governments. American federalism is a good illustration: the states yielded certain powers to the union, retaining others.

26. Examples of these functions include the preparation of areawide comprehensive plans and the exercise of review powers over local zoning and planning activities that might affect the region. These functions may be assigned or transferred by local governments to a regional institution which they have created, by the state legislature to a regional council it has created and supports, or by a comprehensive urban county to an organization it has created. REGIONALISM REVISITED, *supra* note 4, at 4.

27. ACIR recommended that these criteria be employed as factors in determining which functions should be transferred or retained, not that some mathematical formula be devised in the process. See ADVISORY COMMISSION ON INTERGOVERNMENTAL RELATIONS, THE CHALLENGE OF LOCAL GOVERNMENTAL REORGANIZATION 10-14 (1974).

28. *Id.* at 10-11.

29. *Id.* at 11-12.

imposed on or benefits received by them; b) have an adequate fiscal capacity to finance their public service responsibilities in a manner that ensures interpersonal and interjurisdictional equalization; and c) are able to absorb the financial risks involved.

*Political Accountability*³⁰ requires that functions be assigned to jurisdictions that a) are controlled by, and accessible and accountable to their residents; and b) maximize the conditions and opportunities for active and productive citizen participation.

*Administrative Effectiveness*³¹ mandates that functions be assigned to jurisdictions that a) are responsible for a sufficient number of functions and can balance competing functional interests; b) encompass a logical geographic area for effective performance of a function; c) explicitly determine the goals and means of discharging assigned public service responsibilities, including periodic reassessment of program goals in light of performance standards; d) are willing to pursue inter-governmental cooperation to reduce conflicts; and e) have adequate legal authority and management capability to perform a function.

ACIR's 1977 *Regionalism Revisited* reiterates the need for stronger regional institutions:

The ACIR's strengthened regional council strategy clearly relies on the raw materials now at hand at the substate level. But it goes far beyond the status quo, in all but a few regions, in its quest for an effective overarching agency that can deal with the growing demand for decisive decision-making in those programs and policies that necessarily are and should be areawide. As currently constituted, most councils of governments and regional planning bodies have not been equal to the tasks thrust upon them. They have become classic examples of organizations with responsibilities which far surpass their authority to carry them out. The problems which regional bodies are expected to solve typically are those which local jurisdictions, the states and the Federal government have found too difficult to manage, yet the powers to resolve the situations are denied to the region. Thus, past failures at the regional level should have been expected, and future ones surely remain in store for these bodies unless they are given greater authority.³²

ACIR's organizational model classifies regional councils³³ as agen-

30. *Id.* at 12-14.

31. *Id.* at 14.

32. REGIONALISM REVISITED, *supra* note 4, at 35.

33. *Id.* at 34-37.

cies of local government when a minimum of sixty percent of the governing board is composed of locally elected officials appointed by member governments, although deriving legal status from the state. Although not yet legislatively adopted, ACIR's recommendations have influenced federal policy. This organizational model has been incorporated into revised planning regulations promulgated in the past few years for many of the federal programs having an areawide thrust. Most notable in this regard have been the joint UMTA/FHWA transportation planning regulations³⁴ and HUD's section 701 and Areawide Housing Opportunity Plan regulations.³⁵

Additional impetus has originated with federal planners and legislators. Recently, in an effort to strengthen regional planning and coordination, two new federal proposals have been made. First, HUD is in the process of developing a program to encourage regional growth management planning consistent with those national goals relating to the reversal of negative urban trends. The proposed Regional Strategy Incentive Plan would rely primarily on federal funds as leverage in encouraging local participation and in giving power to regional councils.³⁶ Under this proposal, HUD would certify those areawide plans that provide housing alternatives for low and moderate income groups, mandate land use patterns consistent with energy conservation measures, try to match jobs with unemployment, share their healthy tax base with neighbors whose tax bases have stagnated, and encourage the use of mass transit.³⁷ Certified plans would be eligible for larger federal grants and other assistance.³⁸ Second, the Magnuson-Ashley Bill currently before Congress,³⁹ would amend the Intergovernmental Cooperation Act of 1968⁴⁰ by adding a new areawide planning requirement. The purpose of the amendment is to strengthen areawide planning agencies, to provide consistency among federal requirements placed on areawide agencies, and to encourage efficient and effective management of urban growth and redevelop-

34. 23 C.F.R. § 450 (1976).

35. See text accompanying notes 6-8 *supra*.

36. See Current Developments, *HUD Nearing Final Stages in Drafting Regional Strategy Incentive Plan*, [1977] 5 HOUS. & DEV. REP. (BNA) 263.

37. *Id.*

38. *Id.* See also Embry, *Embry Proposes Regional Solutions to Urban Problems*, 7 PRACTICING PLANNER 4-6 (1977).

39. The Intergovernmental Coordination Act of 1977, S. 892, 95th Cong., 1st Sess. (1977) (sponsored by Sen. Magnuson and others); H.R. 4406, 95th Cong., 1st Sess. (1977) (sponsored by Rep. Ashley and others). The two bills are identical.

40. 42 U.S.C. § 4201 (1970).

ment.⁴¹

The proposed Intergovernmental Coordination Act would require that, as a condition for further receipt of federal funds, every area-wide agency designated as an A-95 clearinghouse⁴² must "prepare, adopt, and update annually a program for the coordinated use of federal areawide planning assistance to develop and implement a unified and comprehensive areawide development plan" within two years from the date of enactment of the bill.⁴³ In addition, no assistance under any federal program would be provided to local general or special purpose governments within the jurisdiction of an areawide agency that does not adopt a plan within four years of the date of enactment.⁴⁴ Finally, where a plan has been adopted by the areawide agency, federal funds would not be provided to any unit of local government, or to any special purpose unit for use within the local government jurisdiction, which has not individually adopted such plan.⁴⁵ Activities necessary to develop this plan would be eligible for assistance under any federal program that provides funds for areawide planning or review.⁴⁶

The Act also requires that, prior to providing any federal funds or "recognition" to any agency whose jurisdictional area comprises more than one unit of local government and is not an A-95 clearinghouse, the federal agency head must require a memorandum of agreement with the A-95 agency specifying the manner activities will be coordinated.⁴⁷ In addition, no federal agency can provide assistance to a project or program which, based upon review by the A-95 agency with final determination by the federal agency, is inconsistent with areawide development planning.⁴⁸

The HUD proposals for certification of regional development strategies, the Magnuson-Ashley proposals for comprehensive areawide

41. The Intergovernmental Coordination Act of 1977, note 39 *supra*.

42. Office of Management and Budget, *Circular No. A-95*, 1976 Amendments. This circular, issued pursuant to the Intergovernmental Corporations Act of 1968, 42 U.S.C. § 4201 (1970), set up a system to provide designated state, local, metropolitan and regional agencies an opportunity to evaluate proposed federally assisted projects. It created a number of "clearinghouses" whose purpose is to coordinate agency input. *Id.* at § 4231.

43. The Intergovernmental Coordination Act of 1977, *supra* note 39, at § 703.

44. *Id.* § 703(d).

45. *Id.*

46. *Id.* § 706.

47. *Id.* § 703(c).

48. *Id.* § 703(e).

development plans, and the ACIR proposals for increased authority for regional institutions all seek the same goal. The current federal proposals make strong, persuasive arguments for regional growth management planning through strengthened regional councils to ensure resolution of critical regional planning and resource allocation issues.⁴⁹

At the same time, some interesting new policy proposals for state growth management explicitly recognize a regional role. Two of the most recent initiatives by state governments are those of Massachusetts and California. They join previous actions by Florida,⁵⁰ Vermont,⁵¹ and other states⁵² to inject regional review into development decisions at the local level.

The Massachusetts Growth Policy Report⁵³ recognizes that "[g]rowth-related problems frequently extend beyond municipal boundaries."⁵⁴ It recommends that

[e]nabling legislation should be submitted to allow the existing regional planning districts upon a vote of a majority of its constituent communities to exercise regional review and approval functions over developments of regional import and areas of critical environmental concern.⁵⁵

The Report notes that frequently the context of local development decisions is not broad enough and that regional review may be needed to evaluate those impacts that spill onto other communities.

The Urban Development Strategy for California⁵⁶ stresses the need for intergovernmental planning, noting that the primary role

49. Other recent federal studies dealing with the need to coordinate and strengthen substate planning programs include: COMPTROLLER GENERAL OF THE U.S., *FEDERALLY ASSISTED AREAWIDE PLANNING: NEED TO SIMPLIFY POLICIES AND PRACTICES* (1977); INTERAGENCY TASK FORCE ON FEDERAL PLANNING REQUIREMENTS, OFFICE OF MANAGEMENT AND BUDGET, *PRELIMINARY WORKING PAPERS: REVIEW OF FEDERAL PLANNING REQUIREMENTS* (1977).

50. Florida Land and Water Management Act of 1972, FLA. STAT. ANN. § 380.012 (West Supp. 1974).

51. VT. STAT. ANN. tit. 10, §§ 6001-6091 (Cum. Supp. 1977).

52. *E.g.*, ME. REV. STAT. tit. 38, §§ 481-488 (Supp. 1977); N.Y. EXEC. LAWS. Art. 27 (McKinney Supp. 1974); ORE. REV. STAT. § 197.005 (1977).

53. MASSACHUSETTS OFFICE OF STATE PLANNING, *CITY AND TOWN CENTERS: A PROGRAM FOR GROWTH* (1977).

54. *Id.* at 81.

55. *Id.* at 82.

56. CALIFORNIA OFFICE OF PLANNING AND RESEARCH, *AN URBAN DEVELOPMENT STRATEGY FOR CALIFORNIA* (1977).

belongs to local governments working together through regional councils. The strategy states: "Cooperative regional planning, too long given lip service, must play a much more prominent role."⁵⁷ In a series of three strong policy statements, each with explicit recommended implementation actions, the California strategy stakes out an advanced position on regional growth guidance:

Policy: Local urban development decisions shall consider all needs for housing, industrial sites and regional public facilities.

Actions under this policy would require cities and counties, working through councils of governments, to assess and allocate regional urban development needs for low and moderate income housing, industrial development, and regional public facilities such as open space and transportation systems. Further, all local general plans and housing plans would have to include a specific finding of conformity with the regional needs assessments and allocations. Each metropolitan COG would review the local plans, assess their cumulative effects, and prepare an annual report to the Governor and Legislature.

Policy: The adverse effects of government actions on the citizens of surrounding jurisdictions shall be minimized: all affected communities shall be able to participate in development decisions.

Actions under this policy would establish a process for resolving intergovernmental conflicts over urban development out of court. When negotiation proves unsuccessful, councils of government would be authorized to appoint arbitration panels empowered to alter plans and development proposals. Lead agencies would be required to consult with councils of government on major projects.

Policy: The plans and regulator actions of special-purpose regional agencies shall be coordinated with the regional land-use plan.

Actions under this policy would require all state and regional agencies and special districts to meet with appropriate councils of government to develop and implement memoranda of understanding and prepare joint work programs, budgets, and concurrence on population and economic assumptions and projections.⁵⁸

Both the Massachusetts and California policy proposals recognize the importance and necessity of regional equity concerns. It will be instructive to see how these proposals fare in the legislative arena,

57. *Id.* at 27.

58. *Id.* at 65-68.

especially in terms of the response by local government lobbies in the two states. Meanwhile, the policies represent additional evidence of the recognition of a need to integrate regional equity concerns into state and local growth management.

II. REGIONAL GENERAL WELFARE: THE COURTS REVIEW LOCAL PLANS

The second impetus toward a regional perspective in growth management derives from judicial interpretation of the constitutionality of local growth management plans. As local governments increasingly question the value of unrestrained growth and attempt to actively influence development, affected parties challenge in court the authority of local government to manage growth. A new important challenge to *local* growth management efforts is that they violate the constitutional protection afforded by the concept of *regional* general welfare.⁵⁹

The regional general welfare challenge is based on the due process requirement of most state constitutions that the objective of local government regulatory power is to further the health, safety, morals, or general welfare.⁶⁰ This has been interpreted by a number of state courts to include not only the general welfare of the specific locality but of the surrounding region as well.⁶¹ Thus, often, a locality must concern itself in its growth management effort with the regional welfare.

Most states have not yet recognized a regional general welfare standard. This may be due to a lack of opportunity to rule on the question, or to the traditional holding that the minimal constitutional

59. CONSTITUTIONAL ISSUES, *supra* note 1, at 65-75.

60. See I P. NICHOLS, THE LAW OF EMINENT DOMAIN § 4.1 (rev. 3d ed. 1973).

61. Michigan: *Green v. Township of Lima*, 40 Mich. App. 655, 199 N.W.2d 243 (1972); *Bristow v. City of Woodhaven*, 35 Mich. App. 205, 192 N.W.2d 322 (1971). *Contra*, *Kropf v. City of Sterling Heights*, 391 Mich. 139, 215 N.W.2d 179 (1974). New Jersey: *Oakwood at Madison, Inc. v. Township of Madison*, 72 N.J. 481, 371 A.2d 1192 (1977); *Southern Burlington County NAACP v. Township of Mount Laurel*, 67 N.J. 151, 336 A.2d 713 (1975), *cert. denied*, 423 U.S. 808 (1975). New York: *Berenson v. Town of New Castle*, 38 N.Y.2d 102, 341 N.E.2d 236, 378 N.Y.S. 2d 672 (1975), *on rem'd*, — N.Y.2d —, — N.E.2d —, — N.Y.S.2d — (Dec. 6, 1977); *Golden v. Planning Bd. of Ramapo*, 30 N.Y.2d 359, 285 N.E.2d 291, 334 N.Y.S. 2d 138 (1972) *cert. denied*, 409 U.S. 1003 (1972). Pennsylvania: In the application of *Friday*, — Pa. Commw. Ct. —, 381 A.2d 504 (1978); *Surrick v. Zoning Bd.*, — Pa. —, 382 A.2d 105 (1977); *Township of Willistown v. Chesterdale Farms, Inc.*, 462 Pa. 445, 341 A.2d 466 (1975); *Appeal of Kit-Mar Builders, Inc.*, 439 Pa. 466, 268 A.2d 765 (1970); *Appeal of Girsh*, 437 Pa. 237, 263 A.2d 395 (1970); *National Land Inv. Co. v. Kohn*, 419 Pa. 504, 215 A.2d 597 (1965).

requirement is that the community further its own welfare.⁶²

Some states appear to accept an "open door" policy whereby a locality may not act in a way that would cause injury to the regional welfare.⁶³ Under this formulation a locality may not exclude certain groups, such as racial minorities, and may not exclude housing for lower income groups if the locality has the only feasible site for such a project in the whole region.

Other state courts fully embrace the regional equity concept, holding that a locality has a responsibility to actively enhance the regional welfare by providing housing opportunities for all income groups, including its fair share of low and moderate income residents, in the present and future regional population.⁶⁴ Even these courts, however, have not yet extended this concept to require that a locality provide a fair share of employment opportunities, or accept its fair share of major governmental installations necessary for the functioning of the region, or to other things that could easily be viewed as having regional importance. The courts have not gone as far as progressive regional agencies, such as the Metropolitan Washington Council of Governments, in this respect.⁶⁵

Even under the most advanced judicial interpretations of regional general welfare, the community has a responsibility only to provide an *opportunity* for housing to accommodate lower income groups.⁶⁶ This usually requires a change in existing land use controls to allow

62. Historically, the definition of "general welfare" has remained vague. This has resulted from the reluctance of most courts to evaluate local legislative judgments: zoning actions are ordinarily upheld unless the challenger is able to shoulder the heavy burden of proving them unreasonable. See *Village of Euclid v. Ambler Realty Co.*, 272 U.S. 365 (1926). But see *Fasano v. Board of Comm'rs*, 264 Ore. 574, 507 P.2d 23 (1973). Most of the cases dealing with an exercise of the police power have examined its relation to the health, safety, morals or general welfare *of the community*. See, e.g., *Berman v. Parker*, 348 U.S. 26, 33 (1954); *Hadacheck v. Sebastian*, 239 U.S. 394, 410 (1915).

63. Pennsylvania: see cases collected in note 61 *supra* Michigan: see cases collected in note 61 *supra* New York: *Golden v. Planning Bd. of Ramapo*, 30 N.Y.2d 359, 285 N.E.2d 291, 334 N.Y.S.2d 138 (1972), *cert. denied*, 409 U.S. 1003 (1972).

64. New Jersey: see cases collected in note 61 *supra* New York: *Berenson v. Town of New Castle*, 38 N.Y.2d 102, 341 N.E.2d 236, 378 N.Y.S.2d 672 (1975) (illustrating New York's evolution from its earlier "open doors" approach).

65. For a detailed description of the activities of the Washington COG, see D. GODSCHALK, D. BROWER, D. HERR, & B. VESTAL, *RESPONSIBLE GROWTH MANAGEMENT: CASES AND MATERIALS*, Chapter 17 (Center for Urban and Regional Studies, University of North Carolina, 1977) [hereinafter cited as *RESPONSIBLE GROWTH MANAGEMENT*].

66. *Oakwood at Madison, Inc. v. Township of Madison*, 72 N.J. 481, 371 A.2d

higher density uses without superfluous, cost-adding restrictions. It does not require that the locality actually build the housing. Moreover, at least in New Jersey, the leading regional welfare state, the fair share requirement applies only to "developing" communities⁶⁷ not to those which are already substantially developed,⁶⁸ nor to those which are primarily undeveloped and are experiencing little growth.⁶⁹ In developing municipalities, the obligation to accept a fair share may be avoided only if the municipality proves the existence of particular circumstances why it should not be required to do so.⁷⁰ Proof of substantial environmental harm, or other extreme impact such as doubling the population, might be sufficient.⁷¹

Two major decisions concerning the rapidly-evolving area of the regional general welfare were recently handed down. These cases involved challenges to development regulations of Madison Township, New Jersey and Livermore, California.

The New Jersey Supreme Court modified and expanded the landmark *Mount Laurel*⁷² case in its 1977 decision in *Oakwood at Madison, Inc. v. Township of Madison*.⁷³ The court unanimously affirmed the trial court's invalidation of the municipal zoning ordinance as exclusionary, using *Mount Laurel* standards.⁷⁴ The court, however, modified *Mount Laurel*, holding that neither the locality nor the reviewing court are required to devise and adopt "specific formulae for estimating the precise fair share of the lower income

1192 (1977); *Southern Burlington County NAACP v. Township of Mount Laurel*, 67 N.J. 151, 160, 336 A.2d 713, 724 (1975), *cert. denied*, 423 U.S. 808 (1975).

67. *Southern Burlington County NAACP v. Township of Mount Laurel*, 67 N.J. 151, 179-80, 336 A.2d 713, 727-28 (1975), *cert. denied*, 423 U.S. 808 (1975). See notes 125-29 and accompanying text, *infra*.

68. See, e.g., *Nigito v. Borough of Closter*, 142 N.J. Super. 1, 359 A.2d 521 (App. Div. 1976).

69. *Southern Burlington County NAACP v. Township of Mount Laurel*, 67 N.J. 151, 189-91, 336 A.2d 713, 733 (1975), *cert. denied*, 423 U.S. 808 (1975). The definition of "developing" is explored in Ackerman, *The Mount Laurel Decision: Expanding the Boundaries of Zoning Reform*, 1976 U. ILL. L.F. 1; Rose & Levin, *What is a "Developing Municipality" within the Meaning of the Mount Laurel Decision?* 4 REAL ESTATE L. J. 359 (1976).

70. *Southern Burlington County NAACP v. Township of Mount Laurel*, 67 N.J. 151, 180, 336 A.2d 713, 728 (1975), *cert. denied*, 423 U.S. 808 (1975).

71. *Id.* at 186-87, 336 A.2d at 731.

72. *Id.* at 151, 336 A.2d 713 (1975).

73. 72 N.J. 481, 371 A.2d 1192 (1977).

74. *Id.* at 552, 371 A.2d at 1227.

housing needs of a specifically demarcated region.”⁷⁵ The court justified this holding by citing the many different approaches taken by experts as to how a region should be defined and which criteria are relevant to an equitable fair share allocation.⁷⁶ In light of this diversity of opinion the court was not prepared to embrace a single method as being the most appropriate.

Rather than fair share quotas, the court stressed a new mode of granting relief: making good faith efforts toward eliminating or minimizing undue cost-generating requirements in the challenged zoning ordinance with respect to reasonable areas within the developing municipality.⁷⁷ This new zoning should make possible “least cost housing,” the cheapest dwelling units feasible in the unsubsidized housing market that still meet minimum standards for adequate safety and health.⁷⁸ Although this housing is not expected to immediately meet the needs of low and moderate income people, the court felt it would eventually filter down to these people and might aid generally by increasing the housing supply.⁷⁹

While the New Jersey Supreme Court discouraged trial courts from estimating precise numbers of least cost housing units that would be required, the decision left courts with more narrowly defined remedial powers that could be exercised without establishing precise quotas.⁸⁰ Additionally, dicta in the decision emphasized an important role for administrative agencies in establishing proper housing allocation patterns. Trial courts are allowed to give prima facie judicial acceptance to regions and housing allocations established by regional planning commissions or state-wide housing allocation plans.⁸¹ The relief directed in this case, probably typical of the relief available under *Madison*, required modification of the zoning ordinance to allow for substantial areas of single family dwellings on small lots, and sought to eliminate restrictions in multifamily and PUD areas that discourage construction of dwellings having more than two bedrooms. It also forced a change in PUD requirements to eliminate undue cost-generating restrictions, and then required modification of undue cost-generating restrictions in areas for least

75. *Id.* at 498-99, 371 A.2d at 1200.

76. *Id.*

77. *Id.*

78. *Id.* at 512-14, 371 A.2d at 1207-08.

79. *Id.* at 513 n.22, 371 A.2d at 1207-08 n.22.

80. *Id.* at 553, 371 A.2d at 1228.

81. *Id.* at 531-36, 371 A.2d at 1217-19.

cost housing.⁸²

In the other major recent decision, the California Supreme Court appears to have adopted a regional general welfare criterion to test proper exercise of the local police power. In *Associated Home Builders of Greater East Bay, Inc. v. City of Livermore*,⁸³ a developer challenged the right of the city to pass an ordinance by initiative that prohibited the issuance of any residential building permits until a certain level of public services had been achieved. The court upheld the city to the extent that enactment by initiative did not violate the state enabling act⁸⁴ and held that the ordinance itself was not void by reason of vagueness.⁸⁵ But in an innovative departure from precedent, the court remanded the case to give plaintiff a chance to show that the ordinance was not a constitutional exercise of the city's police power.⁸⁶ Articulating the standards that should be used on remand, the court established as a proper constitutional test whether the ordinance reasonably relates to the welfare of those whom it significantly affects.⁸⁷ With regard to the particular challenged ordinance, the court wrote: "if . . . the ordinance may strongly influence the supply and distribution of housing for an entire metropolitan region, judicial inquiry must consider the welfare of that region."⁸⁸

This regional welfare test is to be used only where the locality's action has ramifications for a larger geographic area. The existence of this broader impact, along with the definition of the region, is to be determined as a question of fact by the trial court.⁸⁹ The trial court is to forecast the probable effect and duration of the restriction, identify competing interests affected by the restriction, and determine whether the ordinance, in light of the probable impact, is a reasonable accommodation of the competing interests.⁹⁰ While a presumption of validity is to be accorded a legislative determination that there is a real and substantial relation to the public welfare, there must be a reasonable basis in fact to support this determination.⁹¹

82. *Id.* at 553, 371 A.2d at 1228.

83. 18 Cal.3d 582, 557 P.2d 473, 135 Cal. Rptr. 41 (1976).

84. *Id.* at 590-96, 557 P.2d at 476-81, 135 Cal. Rptr. at 44-49.

85. *Id.* at 596-601, 557 P.2d at 481-83, 135 Cal. Rptr. at 49-51.

86. *Id.* at 601-10, 557 P.2d at 483-89, 135 Cal. Rptr. at 51-57.

87. *Id.* at 601, 557 P.2d at 483, 135 Cal. Rptr. at 51.

88. *Id.* at 607, 557 P.2d at 487, 135 Cal. Rptr. at 55.

89. *Id.* at 607-09, 557 P.2d at 487-88, 135 Cal. Rptr. at 55-56.

90. *Id.* at 608-09, 557 P.2d at 488, 135 Cal. Rptr. at 56.

91. *Id.* at 609, 557 P.2d at 488-89, 135 Cal. Rptr. at 56-57.

While the California court expressly rejects the New Jersey and Pennsylvania regional general welfare cases as controlling, because they are based on state law⁹² and involve a situation where only poorer people are prevented from moving into the locality,⁹³ *Livermore* is entirely consistent with those cases. The California standard is a little different in the use of the presumption of validity and in the role given to the trial court,⁹⁴ but the basic result requires local actions be tested for constitutionality according to their impact on an affected region.⁹⁵

The protection afforded by the regional general welfare standard extends primarily to potential residents of the locality and to the residents of the region. Developers may assert this claim as well in instances where they desire to build more units or a different type of unit than presently allowed by local ordinance. Whether a particular plaintiff has standing will be a close question that depends on the standards of the state in which suit is brought.⁹⁶ In many instances, however, the standing hurdle can be cleared if plaintiffs represent a variety of interests that include a developer who wishes to build in the locality but is prevented by the challenged ordinance,⁹⁷ and lower income persons who are the intended residents of the developer's precluded project.⁹⁸ While in some courts neither the developer nor the potential residents could bring a regional general welfare challenge alone,⁹⁹ in other states either might be sufficient.¹⁰⁰ Thus, to avoid a

92. *E.g.*, *Southern Burlington County NAACP v. Township of Mount Laurel*, 67 N.J. 151, 174, 336 A.2d 713, 724 (1975), *cert. denied*, 423 U.S. 808 (1975).

93. 18 Cal.3d at 607, 557 P.2d at 473, 135 Cal. Rptr. at 55.

94. The California Court requires a more substantial initial burden to be met before the traditional presumption is rebutted.

95. 18 Cal. 3d at 601, 557 P.2d at 483, 135 Cal. Rptr. at 51: "[T]he constitutionality of the restriction must be measured by its impact not only upon the welfare of the enacting community but upon the welfare of the surrounding region."

96. CONSTITUTIONAL ISSUES, *supra* note 1, at 35-42.

97. *Id.* at 39-40. *See* *Warth v. Seldin*, 422 U.S. 490, 510 (1975).

98. *See* CONSTITUTIONAL ISSUES, *supra* note 1, at 39-42. *See, e.g.*, *Warth v. Seldin*, 422 U.S. 490, 508 (1975); *Parkview Heights Corp. v. City of Black Jack*, 467 F.2d 1208 (8th Cir. 1972); *Crow v. Brown*, 457 F.2d 788 (5th Cir. 1972); *Kennedy Park Homes Ass'n, Inc. v. City of Lackawanna*, 436 F.2d 108 (2d Cir. 1970), *cert. denied*, 401 U.S. 1010 (1971); *Bailey v. City of Lawton*, 425 F.2d 1037 (10th Cir. 1970).

99. *See* Moskowitz, *Standing of Future Residents in Exclusionary Zoning Cases*, 6 AKRON L. REV. 189, 198 (1973). *But see* *Gautreaux v. Chicago Housing Auth.*, 265 F. Supp. 582 (N.D. Ill. 1967).

100. Moskowitz, *Standing of Future Residents in Exclusionary Zoning Cases*, 6 AKRON L. REV. 37-40 (1973).

regional general welfare challenge, planning officials attempting to influence the rate, amount or type of growth will have to consider the impact of the growth management program on developers, regional residents and potential residents.

A. *Influencing Rate of Growth*

By influencing the rate of its growth a locality may have an impact on the region if the allowable rate is substantially below that which would have occurred absent growth controls. This may divert potential residents to second or third choice living environments. It may harm the residents in the rest of the region by forcing them to pay for a disproportionate share of the infrastructure needed to accommodate the area's new residents. Finally, rate controls may upset developers by frustrating immediate project plans.

Ramapo, New York, is one example where a court examined growth controls in terms of their impact on the region.¹⁰¹ In reviewing an adequate facilities ordinance and the capital improvements program, which were to have the effect of staging growth over an eighteen year period, the New York court appeared to be willing to evaluate the impact of the controls from a long-range rather than short-range perspective.¹⁰² Instead of emphasizing short-term distortions in the regional housing market, the court was convinced that the regional impact was not unconstitutionally harsh since the staging was motivated by a desire for orderly and efficient population assimilation, not exclusion. The plan was called "a bona fide effort to maximize population consistent with orderly growth."¹⁰³ Because it was confronting the challenge of growth with open doors, the possible eighteen year delay in being allowed through those doors was held not to be so harmful to the region as to require invalidation.

The distinction between eventual assimilation and exclusion has been important to other courts as well. For example, in the litigation over Petaluma's growth management system,¹⁰⁴ while invalidating the system on grounds that infringed on the right to travel (closely related to the regional welfare),¹⁰⁵ the district court stressed that the

101. *Golden v. Planning Bd. of Ramapo*, 30 N.Y.2d 459, 285 N.E.2d 291, 334 N.Y.S.2d 138 (1972).

102. *Id.* at 381, 285 N.E.2d at 303, 334 N.Y.S.2d at 153-54.

103. *Id.* at 379, 285 N.E.2d at 302, 334 N.Y.S.2d at 152.

104. *Construction Ind. Ass'n v. City of Petaluma*, 375 F. Supp. 574 (N.D. Cal. 1974), *rev'd*, 422 F.2d 897 (9th Cir. 1975), *cert. denied*, 425 U.S. 934 (1976).

105. CONSTITUTIONAL ISSUES, *supra* note 1, at 93-104.

"urban extension line"¹⁰⁶ had the effect of setting a maximum population far below the projected uncontrolled population level.¹⁰⁷ In reversing the lower court and upholding the system, the California Court of Appeals rejected the idea that the plan set any maximum population and instead emphasized that the plan was only to be effective for a five year period.¹⁰⁸

In some cases, controls on growth rate may be challenged as having the effect of excluding lower income people. *Mount Laurel* suggests in dictum that timed development schemes can be protected from successful regional general welfare attacks by providing for a mix of building types and income groups at an early stage.¹⁰⁹

The early indication is that controls on rate for a relatively short period of time that do not in fact set a maximum population, and controls on rate over a longer period that accommodate a population close to the level that would have been attained without growth controls, are not vulnerable to regional general welfare attacks.

B. *Influencing Amount of Growth*

Attempts to control the total amount of growth, as in population caps,¹¹⁰ appear to be more vulnerable to regional general welfare challenges. This occurs because controls on growth amount are perceived as more permanent than controls on growth rate. They are seen as attempts to avoid the local responsibility to accept "natural growth." Finally, their effects are more easily measured by the court since they identify a specific end state. By definition, they aim at exclusion rather than assimilation.

In the course of invalidating Boca Raton's population cap, a Florida trial court examined the impact of the cap on the region.¹¹¹ Since this system, which limited the total size of the city to 40,000 dwelling

106. An urban extension line designates the boundary beyond which municipal services will not be extended, and is expected to direct future growth to already-served areas.

107. *Construction Ind. Ass'n. v. City of Petaluma*, 375 F. Supp. 574, 576 (N.D. Cal. 1974).

108. *City of Petaluma v. Construction Ind. Ass'n.*, 522 F.2d 879, 902 (9th Cir. 1975).

109. *Southern Burlington County NAACP v. Township of Mount Laurel*, 67 N.J. 151, 188 n.20, 336 A.2d 713, 732 n.20 (1975).

110. A population cap is a figure representing maximum allowable population. An annual building permit cap would be imposed to indirectly effectuate the same objective.

111. *Boca Villas Corp. v. Pence*, 45 Fla. Supp. 65 (1976).

units, projected a detailed end state,¹¹² the court was able to draw conclusions about the precise number of new single and multifamily units that would be available to low and moderate income families.¹¹³ In addition, evidence was introduced about the inflationary impact of the cap on the price of existing housing units.¹¹⁴ While the Florida Supreme Court has not yet accepted a regional standard for measuring the general welfare, the trial court did state in dictum that land use decisions of substantial magnitude should be reviewed, to some extent, in terms of whether they unnecessarily shift a locality's unwanted housing responsibilities to neighboring communities.¹¹⁵ This was found to be the effect in Boca Raton.¹¹⁶

It is doubtful whether this result would be reached in an attack on a plan in which the locality's fair share of housing has been reasonably determined and provided for. An example of such a plan is found in Sanibel, Florida.¹¹⁷ Not only does the Sanibel plan contain inclusionary policies based on a study of the need for low and moderate income housing on the island, but the plan also examines its impact on all types of housing in the county.¹¹⁸ The plan finds that, even if all of the residents who previously could have lived on the island were to move to surrounding Lee County, persons denied Sanibel residence by the city's downzoning would constitute only 1.8% of the county's 1995 population.¹¹⁹ This was felt an insignificant shifting of an economic or environmental burden to a county and other nearby cities which are currently encouraging growth.¹²⁰ Considering the strong health and safety reasons for Sanibel's downzoning,¹²¹ it is probable that a court would agree, though this issue has not been litigated.

112. CHARTER OF THE CITY OF BOCA RATON, *as amended by* § 12.09 (1972).

113. *Boca Villas Corp. v. Pence*, 45 Fla. Supp. 65, 78-79 (1976).

114. *Id.* at 79.

115. *Id.*

116. *Id.* at 79-80.

117. The Sanibel Plan is described in RESPONSIBLE GROWTH MANAGEMENT, *supra* note 65, at chap. 11.

118. CITY OF SANIBEL, COMPREHENSIVE LAND USE PLAN, CITY OF SANIBEL, LEE COUNTY, FLORIDA 153, 164-65 (1976).

119. *Id.* at 153.

120. *Id.*

121. *See, e.g.*, J. CLARK, THE SANIBEL REPORT 102-09, 114-17 (1976).

C. *Influencing Type of Growth*

Limits on the type of growth are likely to produce regional general welfare challenges when the restrictions tend to preclude the types of housing normally occupied by people of lower income, or when they raise housing costs within relevant housing types such that lower income people cannot afford to live in the jurisdiction. These are the kinds of controls involved in the landmark New Jersey regional general welfare cases.

This sort of controversy is most likely to arise in a suburban context. The incentives for regulating types of growth in this manner may range from pure racial or economic exclusionary motivations to a perceived need to protect the jurisdiction's fiscal base to environmental rationalizations. While there has been much analysis concerning whether these motivations are in fact supported by either the realities of the situation or the law,¹²² courts accepting the regional standard have adopted the view that only very extreme circumstances justify a jurisdiction's refusal to accommodate a full range of housing types.¹²³

The Mount Laurel township consciously adopted policies designed to result in economic discrimination and the exclusion of substantial segments of the area population.¹²⁴ These policies were justified as being in the best present and future fiscal interest of the municipality and its residents. While the township maintained that its actions to influence type of growth were legally permissible, the New Jersey Supreme Court did not agree.

In the landmark 1975 decision of *Southern Burlington County NAACP v. Township of Mount Laurel*,¹²⁵ the New Jersey Supreme Court held that all developing municipalities must, by their land use regulations, make realistically possible the accommodation of their fair share of the present and prospective regional need for an appropriate variety and choice of housing, especially for low and moderate income people.¹²⁶

122. *E.g.*, M. BROOKS, HOUSING EQUITY AND ENVIRONMENTAL PROTECTION: THE NEEDLESS CONFLICT (1976).

123. See text accompanying notes 70-71 *supra*.

124. *Southern Burlington County NAACP v. Township of Mount Laurel*, 67 N.J. 151, 169, 174 n.10, 336 A.2d 713, 722, 725 n.10 (1975).

125. 67 N.J. 151, 336 A.2d 713 (1975).

126. *Id.* at 188, 189, 336 A.2d at 732, 733.

The decision left open several exceptions under which accommodation of the locality's fair share would not be required and a type of growth could be regulated. The decision applied only to developing communities,¹²⁷ not to those already predominantly developed nor to those not experiencing a demand for substantial growth.¹²⁸ In addition, a municipality may be excused from its fair share quota if it can demonstrate that greater detriment would result if the city was required to provide for lower cost housing (e.g., substantial environmental injury).¹²⁹ While these exceptions have only been articulated in the New Jersey state court, it is probable that other states accepting the regional welfare standard will similarly limit application in challenges of growth management systems regulating the type of growth.

D. *Implications for System Design*

Planners and local officials operating in states where a regional standard has not yet been adopted technically need not utilize measures that decrease the risk of a regional general welfare challenge. Yet there are compelling reasons for them to design their system as if this challenge were available to developers, regional residents, and potential residents in their area. First, their courts may accept the regional standard in the future. The state courts adopting the regional test are generally acknowledged to be in the forefront of land use law, and it is expected that additional states will follow this lead. Once the standard is adopted, existing systems, not just those implemented after the judicial adoption, will be judged according to the regional standard.

Additionally, future comprehensive land use legislation may require consideration of regional impacts at the time of plan formation for plans to be valid.¹³⁰ Where this type of legislation is a possibility, planning efficiency suggests that regional impacts be considered from the outset.

127. *Id.* at 179, 180, 336 A.2d at 727-28.

128. *See* notes 68-69 *supra*.

129. *Southern Burlington County NAACP v. Township of Mount Laurel*, 67 N.J. 151, 185, 336 A.2d 713, 731 (1975).

130. *E.g.*, The Florida Local Government Comprehensive Planning Act of 1975, FLA. STAT. ANN. § 163.3161-.3191 (West 1977).

Third, it is more socially responsible to plan for the regional welfare rather than considering only the narrower local welfare. While this argument may not be considered compelling by local taxpayers, it should be considered during initial system design. It might be that, by using certain techniques and development patterns, maximizing the local welfare and maximizing the regional welfare are not inconsistent goals.

This analysis of situations in which to anticipate a regional general welfare challenge suggests several basic prevention measures that vary, depending on the growth management technique chosen. A local government trying to influence the growth *rate* will probably be more successful if the annual limit is not far below the projected annual uncontrolled growth rate, if it emphasizes the temporary nature of the rate limitations (*i.e.*, that it is not a *de facto* population cap) and if it justifies the regulation as a more efficient means of assimilating population increases and not an exclusion. Moreover, the rate regulation is less suspect as an attempt to only gather regional benefits while avoiding regional burdens if it limits all kinds of growth—industrial, commercial, and transient facilities as well as residential facilities. Finally, the rate regulation will be more secure if it avoids a disproportionate economic impact by making express provisions for an early mix of building types and housing prices.

Those places trying to limit the total *amount* of growth are probably well advised to avoid setting an accommodation far below the projected uncontrolled number without very good justifications backed by professional studies of regional and local impact. Especially because of the probable inflationary impact of a population cap, these cities must make special arrangements to accommodate their regional fair share of lower income housing.

Finally, jurisdictions directly regulating the *type* of growth will have to temper controls by recognizing their responsibility to provide at least their fair share of the region's need for lower cost housing. There are a range of techniques available for determining a "fair share" and for making realistic accommodations. One of the basic techniques for guaranteeing accommodation of a locality's fair share of lower income residents is through a fair share housing allocation agreement such as that used by the Miami Valley Regional Planning Commission, the Metropolitan Washington Council of Governments, and others.¹³¹

131. *E.g.*, METROPOLITAN WASHINGTON COUNCIL OF GOVERNMENTS, THE WASHINGTON METROPOLITAN AREA'S AREAWIDE HOUSING OPPORTUNITY PLAN

Other steps that may be taken by an advisory regional agency, limited by a lack of direct regulatory powers, include using its A-95 review powers¹³² in a systematic manner to promote a wider range of housing opportunities, designing prototype plans for adoption by local jurisdictions, developing a regional growth policy statement, and offering a source of ready information for use by local jurisdictions.

While implementation of these steps usually depends on persuasion and/or local action, there is an indication that some courts will give more weight to fair share housing allocation agreements. In *Madison Township*,¹³³ in dictum, the New Jersey Supreme Court said that a court may give prima facie judicial acceptance to regional boundary determinations and sub-area housing allocations of official state, regional, or multicounty planning efforts.¹³⁴ In states following this approach, officially adopted policies such as a fair share housing formula, with its statement of need for low and moderate cost housing by jurisdiction, could form the basis of judicial intervention to prevent growth management efforts inconsistent with the regional welfare. This *Madison Township* formulation goes a step farther than *Mount Laurel*, which gave presumptive weight to regional fair share housing allocation agreements only when they were binding on all jurisdictions in the region.¹³⁵

While fair share agreements are one way of determining how many units of lower cost housing a municipality should prepare to accommodate, they do not, in themselves, assure the construction of the needed housing. Rezoning an amount of land sufficient to accommodate the jurisdiction's fair share or small single family lots or multi-family units is one of the first steps. Toward this end, studies have been made of the rezoning necessary to produce certain housing types and costs.¹³⁶ In a proper case, courts will find this type of rezoning mandatory.¹³⁷

(1976); D. LISTOKIN, FAIR SHARE HOUSING ALLOCATION (1976). For a brief description of how a fair share housing allocation agreement operates, see text accompanying notes 175-76 *infra*.

132. See note 42 *supra*.

133. *Oakwood at Madison, Inc. v. Township of Madison*, 72 N.J. 481, 371 A.2d 1192 (1977).

134. *Id.* at 531-37, 371 A.2d at 1217-19.

135. *Southern Burlington County v. Township of Mount Laurel*, 67 N.J. 151, 188-89, 336 A.2d 713, 732-33 (1975).

136. *E.g.*, E. BERGMAN, ELIMINATING EXCLUSIONARY ZONING: RECONCILING WORKPLACE AND RESIDENCE IN SUBURBAN AREAS 165-177 (1974).

137. See *Oakwood at Madison, Inc. v. Township of Madison*, 72 N.J. 481, 552,

A second way to increase the amount of lower cost housing may be through municipal establishment of a local housing authority. This organization would pursue whatever federally assisted lower cost housing is available, subject to any fair share allocation agreement about the location of federally assisted housing. This tactic depends on local initiative, since no court has been willing to order establishment of a local housing authority as part of a judicial remedy.¹³⁸

A third way to encourage lower cost housing may be through a total reexamination of subdivision regulations, housing codes, building codes, and the zoning ordinance with the purpose of amending them to make possible the jurisdiction's fair share of lower-cost housing. This "least cost housing" approach was endorsed in *Madison Township* as a means of getting away from artificial quotas or formula-based estimates of specific unit "fair shares."¹³⁹ It recognizes that reliance on federal housing subsidies for major amounts of lower cost housing is misplaced at this time,¹⁴⁰ and instead encourages the construction of least cost unsubsidized housing consistent with minimum standards of health and safety. While this housing may not be inexpensive enough to directly house the region's lower income population, in theory it will increase the supply of housing and indirectly make better housing available to lower income residents by shortening the filtering chain.¹⁴¹

371 A.2d 1192, 1228 (1977); *Southern Burlington County NAACP v. Township of Mount Laurel*, 67 N.J. 151, 191, 336 A.2d 713, 734 (1975).

138. For example, the *Mount Laurel* court mentioned only a "moral obligation . . . to establish a housing agency pursuant to state law to provide housing for its resident poor." *Southern Burlington County NAACP v. Township of Mount Laurel*, 67 N.J. 151, 192, 336 A.2d 713, 734 (1975). In *Oakwood*, the Court noted that "[m]unicipalities do not themselves have a duty to build or subsidize housing." *Oakwood at Madison, Inc. v. Township of Madison*, 72 N.J. 481, 499, 371 A.2d 1192, 1200 (1977).

139. See text accompanying notes 75-79 *supra*.

140. See *Oakwood at Madison, Inc. v. Township of Madison*, 72 N.J. 481, 512, 371 A.2d 1192, 1207 (1977). In January 1973, President Nixon announced a moratorium on spending under the principal subsidized housing programs. There is hope for revitalization of these programs or for their replacement by new programs. *Id.* at 511 n.20, 371 A.2d at 1206 n.20.

141. *Id.* at 514 n.22, 371 A.2d at 1208 n.22. The "filtering" or "trickle down" effect has been extensively discussed in housing literature. Basically, it is argued that the provision of additional homes at the upper-income housing market level will result in a progressive movement of home dwellers upward into better units, ultimately opening up additional homes for low income families. See J. LANSING, C. CLIFTON & J. MORGAN, *NEW HOMES AND POOR PEOPLE: A STUDY OF CHAINS OF MOVES* (1969); W. GRIGSBY, *HOUSING MARKETS AND PUBLIC POLICY* 84-130 (1963); Mallach, *Do Lawsuits Build Housing?* 6 *RUTGERS-CAMDEN L.J.* 653, 666 (1975). The New

A fourth technique to encourage the construction of lower cost housing would utilize density bonuses for housing under certain rental or sales prices.¹⁴² This method would probably be most useful where the allowed densities are below the carrying capacity of the land and where the locality wants to encourage a mix of dwelling types and costs within a single subdivision. New Britain Township in Bucks County, Pennsylvania, is one of the many jurisdictions using density bonuses to encourage lower cost housing.¹⁴³ In "Planned Residential Developments," the New Britain zoning ordinance allows a maximum bonus density of up to 105% for meeting specific criteria beyond the basic performance standards. While there are several different ways of adding to allowed density, one method provides a density bonus of two units for each unit of housing having two or more bedrooms, built to sell below \$26,000.¹⁴⁴ Certain requirements are imposed so that only eligible families can purchase these units.¹⁴⁵ The effect of this bonus is limited, to some extent, by providing that construction of moderate income housing can contribute a maximum of ten percent of the total 105 percent density bonus. Thus, as structured, the bonus is only an incentive to construct up to five percent moderate income housing.

A fifth technique involves locally imposed restrictions that encourage lower cost housing by requiring a mix of housing types within a subdivision. Concentrating on a mix of dwelling unit types without paying particular attention to the rental or sales price of those units appears to be the approach taken by some courts accepting the regional general welfare standard.¹⁴⁶ The theory is based on the notion that if those dwelling unit types, especially multifamily, which traditionally supply lower cost housing are allowed, they will be built if there is a demand. New Britain Township has translated this philosophy into its zoning ordinance, providing that subdivisions of a certain size must contain a minimum number of dwelling unit

Jersey Court hopes that the injection of new moderate-cost housing into the market ("shortening the chain") will result in more rapid provision of housing for low-income persons.

142. *Oakwood at Madison, Inc. v. Township of Madison*, 72 N.J. 481, 517 n.27, 371 A.2d 1192, 1209-10 n.27 (1977). *See also Joseph v. Town Bd.*, 24 Misc.2d 366, 198 N.Y.S.2d 695 (1960) (explains need for density bonuses).

143. *NEW BRITAIN TOWNSHIP, BUCKS COUNTY, PA., COMPREHENSIVE AMENDMENT OF 1973*.

144. *Id.*

145. *Id.*

146. *See note 50 supra.*

types, with maximum and minimum percentages for any one type.¹⁴⁷ These unit mix provisions appear to be helpful supplements but should not be relied upon as a major technique for accommodating one's fair share of the region's lower income residents.

Another more direct technique that has been advocated would require all developers to include a certain percentage of lower cost units in each subdivision over a certain size. The New Jersey court has indicated its disapproval of this technique in dictum,¹⁴⁸ and the Virginia court struck down the Fairfax County mandatory inclusionary scheme.¹⁴⁹ While this technique may help ward off a regional general welfare challenge, it appears vulnerable to taking and equal protection challenges.¹⁵⁰

Finally, as a sixth approach, some places have chosen to confront the problem of encouraging all localities to enhance the regional welfare by making adjustments through their power to tax rather than through direct police power regulations. Changes in the taxation scheme have great potential for making localities willing to accommodate their fair share if tax changes reduce the fiscal incentive for exclusionary zoning. On the negative side, however, it is not known to what extent any exclusionary propensity of suburban residents would continue even where they did not see a correlation between increased economic integration and increased tax burden. In addition, changes in the tax scheme are usually not within the power of localities since the state legislature must enact the changes,¹⁵¹ and even it may be constrained by certain provisions in the state constitution.¹⁵²

147. See NEW BRITAIN TOWNSHIP, *supra* note 143, at 14.

148. Oakwood at Madison, Inc. v. Township of Mount Laurel, 72 N.J. 481, 518 n.28, 371 A.2d 1192, 1210 n.28 (1977) ("rent skewing").

149. Board of Supervisors v. DeGroff Enterprises, Inc., 214 Va. 235, 198 S.E.2d 600 (1973). The Fairfax County scheme included a requirement that developers sell or rent 15% of their units at prices affordable by low and moderate income persons. *Id.* at 235-36, 198 S.E.2d at 601.

150. *Id.*

151. *E.g.*, City of Atlanta v. Gower, 216 Ga. 368, 370, 116 S.E.2d 738, 740-41 (1960). As a general rule a municipal corporation has no power to tax unless the power is "plainly and unmistakably granted by the state." 216 Ga. at 370, 116 S.E.2d at 740.

152. See 2A C. ANTIEAU, MUNICIPAL CORPORATION LAW § 21.56 (1976). Typical state constitutional provisions provide that "taxes shall be levied and collected for public purposes only." *Id.* at § 21.92. Another frequent limitation is that a tax may not be prohibitive, confiscatory, capricious or unreasonable. *Id.* at § 21.42. Taxation is also generally required to be uniform. *Id.* at § 21.48.

Despite these difficulties, at least two places have altered their tax scheme to lessen the incentive for fiscal zoning. The New Jersey legislature, under pressure from the courts, made revisions in school financing so that funding of local schools is no longer borne solely by the locality.¹⁵³

And, in a more direct effort to make the local welfare synonymous with the regional welfare, the Minnesota legislature passed a tax base sharing system for the Minneapolis-St. Paul region.¹⁵⁴ To prevent wasted resources and development distortions that might result from individual localities engaging in intense competition for tax-productive commercial and industrial development, the Act provides for sharing, throughout the region, forty percent of the tax increase since 1971 attributable to increased commercial or industrial valuation.¹⁵⁵ While the idea of a tax base sharing system of this sort has been praised by theorists, it appears that the practical impact in Minneapolis-St. Paul has been minimal. These problems, however, may be attributed to political compromises that so weakened tax incentives they were no longer effective, and not to inherent weaknesses in the theory of tax base sharing itself.

This brief survey shows many different approaches that may be used to encourage or require the accommodation of a locality's fair share of the region's lower income population. The way a planning body chooses to meet that need will depend to a large extent on the degree of commitment to economic integration, the type of housing that can be supported by local facilities, and the amount of power or influence it can muster.

In the future, the courts may expand the concept of regional general welfare to encompass services, employment, and regional facilities as well as lower cost housing. If this happens many of these same techniques will lend themselves to guaranteeing compliance with the regional standard. In addition, more specific techniques such as regional capital facilities programs, regional fair share agreements that go beyond housing, coordinated regional plans, and stiffer regional review should draw more attention. Because the regional general welfare analysis is of recent origin, it is impossible to say with certainty

153. N.J. STAT. ANN. tit. 18A §§ 13-23 to -24. (West 1977).

154. *See, e.g.*, MINN. STAT. ANN. ch. 473F.01-.13 (West 1971). The Minnesota scheme has withstood equal protection and lack of uniformity challenges. *Village of Burnsville v. Onischuk*, 301 Minn. 137, 222 N.W.2d 523 (1974).

155. The Metropolitan Fiscal Disparities Act, MINN. STAT. ANN. § 473F.08 (West 1971).

what its ultimate bounds will be, but from all indications it is probable that both the use and the scope of this constitutional imperative will be expanded.

III. REGIONAL PLANNING PRACTICE: THE WASHINGTON COG EXAMPLE

Planners, from Lewis Mumford in the early 20th century¹⁵⁶ to the present, have recognized that urban problems do not stop at the city limits. They have seen that, in its most basic form, regional equity is concerned with fairness in the distribution of, and access to, developed urban land especially in terms of public facilities and housing for all income groups.

Many regional planners have not been able to cope with regional growth management because they lack authority and because of local government fragmentation. One metropolitan region that has dealt with regional equity issues more successfully than most is the Metropolitan Washington Council of Governments.¹⁵⁷ In the process, they have developed some useful new tools for ensuring that equity concerns are included in regional growth decisions.

Member jurisdictions in the Metropolitan Washington Council of Governments (COG) include four Virginia counties, two Maryland counties, the District of Columbia, and eight cities. Its intergovernmental situation is one of the more complex in the country, involving not only interstate but also federal jurisdictional relationships. However, its powers are as limited as those of the typical voluntary membership COG, centering on planning coordination, and A-95 review.

During the 1960's Washington was the fastest growing of the nation's twelve largest metropolitan areas. Much of Washington's growth between 1960 and 1970 took place in its suburban jurisdictions. Prince William County, Virginia, on the outer edge of the metropolitan area, tripled in population to become the nation's fastest growing large county. The Washington urbanized area, as defined by the Census Bureau, increased from about 340 square miles to 495 square miles.

In the first years of the 1970's, the Washington area growth rate fell sharply. Recent estimates of an average annual growth rate of 40,000 persons per year are only slightly over half the 1960's rate of 79,000

156. *See, e.g.*, L. MUMFORD, *CULTURE OF CITIES* (1938).

157. *See generally* RESPONSIBLE GROWTH MANAGEMENT, note 65 *supra*.

persons per year.¹⁵⁸ Previous growth forecasts have been revised to account for this slower rate. The present 1995 forecast is for a population of 4.23 million people, about a twelve percent decrease from previous forecasts. However, substantial growth is still expected and, based upon current forecasts and local plans, Montgomery, Prince George's and Fairfax Counties are expected to receive seventy-eight percent of the region's population growth over the next twenty years.

In 1971, the Metropolitan Washington Council began a metropolitan review of regional development goals and objectives, including discussions of findings from a re-examination of the Year 2000 Plan.¹⁵⁹ In response to requests made by local governments and citizens during that review, COG issued a *Proposal for a Metropolitan Growth Policy Program*¹⁶⁰ in 1975.

This Proposal defined growth as change in the amount, type, and location of people and jobs within the Washington metropolitan area. It dealt not only with urbanization in fringe areas but also with problems in the older central city and suburbs. The declared intent of the program was:

1. To provide a metropolitan framework that would serve as a foundation for local growth management efforts and as a means of effecting coordination among these different efforts;
2. To assure consistency among COG's current metropolitan functional planning activities in the areas of transportation, housing, land use, water resources, energy and air quality;
3. To increase communication and coordination among local, state and federal agencies whose activities affect the Washington area;
4. To assist local governments and functional planning bodies in developing programs to meet legally mandated requirements such as air and water quality standards.¹⁶¹

The Washington region has a small number of large government jurisdictions, with highly professionalized local planning programs.

158. METROPOLITAN WASHINGTON COUNCIL OF GOVERNMENTS, IMPACT ASSESSMENT: 1980, 1985, 1995, LAND USE AND GROWTH PATTERNS IMPLICATIONS OF FORECASTS 6 (1977).

159. METROPOLITAN WASHINGTON COUNCIL OF GOVERNMENTS, AREAWIDE LAND USE ELEMENT—1972 (1972).

160. METROPOLITAN WASHINGTON COUNCIL OF GOVERNMENTS, note 158 *supra*.

161. METROPOLITAN WASHINGTON COUNCIL OF GOVERNMENTS, COOPERATIVE FORECASTING: SUMMARY REPORT—1976 (1976).

The proposed growth policy program is distinguished from typical planning efforts by three innovative elements that recognize the situational constraints faced by a voluntary membership COG having strong local government members and lacking regulatory and taxing powers. These unique elements are: (1) a cooperative *forecasting* process, (2) a series of *impact analyses*, and (3) an action program that seeks to develop policy and implement regional plans by means of *negotiated agreements* among local jurisdictions.

The COG formulated a cooperative process to analyze growth and change and to develop forecasts of population, households, and employment for use in metropolitan planning programs. The program incorporates a twofold approach in making forecasts. Each of the local governments developed forecasts for its own jurisdiction, while at the same time the Council of Governments, the National Capital Planning Commission, and the Washington Center for Metropolitan Studies collaborated on a system for making regional projections. The sum of the forecasts made by the local governments and the independently-developed regional projections were then compared and evaluated to produce a set of reconciled forecasts for use in COG's metropolitan planning programs.

In the second phase of the program, impact assessments were used to translate forecast information into the potential effects of such growth on future living conditions in the metropolitan area. After investigating assessment methodologies, the COG chose a pragmatic approach that restricted assessments to fields where there are current metropolitan-scale planning programs. Assessments were performed in six areas for which the COG had developed analytical techniques and had some planning responsibilities for land use,¹⁶² air quality,¹⁶³ energy,¹⁶⁴ transportation,¹⁶⁵ water resources,¹⁶⁶ and housing.¹⁶⁷ Through its impact assessment program, the COG tied together anal-

162. METROPOLITAN WASHINGTON COUNCIL OF GOVERNMENTS, note 158 *supra*.

163. METROPOLITAN WASHINGTON COUNCIL OF GOVERNMENTS, IMPACT ASSESSMENT: 1980, 1985, 1995, AIR QUALITY IMPLICATIONS OF GROWTH FORECASTS (1977).

164. METROPOLITAN WASHINGTON COUNCIL OF GOVERNMENTS, IMPACT ASSESSMENT: 1980, 1985, 1995, ENERGY IMPLICATIONS OF GROWTH FORECASTS (1977).

165. METROPOLITAN WASHINGTON COUNCIL OF GOVERNMENTS, IMPACT ASSESSMENT: 1980, 1985, 1995, TRANSPORTATION IMPLICATIONS OF GROWTH FORECASTS (1977).

166. METROPOLITAN WASHINGTON COUNCIL OF GOVERNMENTS, IMPACT ASSESSMENT: 1980, 1985, 1995, WATER RESOURCES IMPLICATIONS OF GROWTH FORECASTS (1977).

167. METROPOLITAN WASHINGTON COUNCIL OF GOVERNMENTS, RESOLUTION

yses of individual functional programs which would not otherwise be coordinated or presented to the public as a series of related findings concerned with regional development policy.

The impact assessments were purposely designed as a bridge between the forecasting process and the action program, or policy development phase. The general conclusion that the COG drew from the impact assessments is that nearly all of the negative impacts anticipated are related to a dispersed pattern of growth that has been forecast, particularly for residential development. Although the growth pattern forecast is not one of uncontrolled sprawl, it is sufficiently dispersed to cause further environmental deterioration, increase automobile dependency in the major suburban jurisdictions, and create service demands and costs which probably cannot be met. A more compact development pattern with a more focused effort to conserve resources would lessen or prevent many of the expected negative impacts.¹⁶⁸ All of the assessments appear to point toward the desirability of attempting, as a matter of policy, to modify the forecast growth pattern.

A *Metropolitan Growth Policy Statement* was drafted in response to the assessments.¹⁶⁹ Its theme emphasizes compact development and conservation of resources. The proposed policies depart, to some extent, both from existing development trends¹⁷⁰ and from the pattern of future growth currently forecast by metropolitan area local governments.¹⁷¹ Key elements of the proposed policy include encouraging growth in specific growth centers (policies are proposed for four types of centers) and identifying urban and rural conservation areas where primary emphasis would be placed on preserving natural resources and neighborhood character.

The proposed policy statement is intended to replace the *Resolution on Development Policies for the Year 2000*¹⁷² adopted by the COG

ENDORING THE ADOPTION OF FISCAL YEAR 1977 FAIR SHARE IMPLEMENTATION PROCEDURES (1977).

168. The more compact an area is, the less expensive it is to service the area, generally speaking. Pipelines are shorter, bus routes are shorter, it is easier to walk where you want to go, etc.

169. METROPOLITAN WASHINGTON COUNCIL OF GOVERNMENTS, PROPOSAL FOR A METROPOLITAN GROWTH POLICY PROGRAM (1975).

170. METROPOLITAN WASHINGTON COUNCIL OF GOVERNMENTS, COOPERATIVE FORECASTING: SUMMARY REPORT—1976 (1976).

171. *Id.*

172. METROPOLITAN WASHINGTON COUNCIL OF GOVERNMENTS, RESOLUTION ON DEVELOPMENT POLICIES FOR THE YEAR 2000 (1964).

Board in 1964. The basic function of the statement would provide a basis for regional decisions made through the COG as a forum of the region's local governments.¹⁷³ The COG also hopes to make it a touchstone for the independent decisions of local, state and federal governments, regional agencies, private businesses, and citizen groups.

Meanwhile, the COG has had several years of experience in using intergovernmental negotiation as the cornerstone of a nationally recognized areawide Fair Share Housing Plan. The specific techniques to be discussed here are the use of fair share housing agreements and an affirmative action housing plan to deal with welfare and equal protection issues.

A. *Fair Share Housing*

One of the first and most effective regional housing allocation programs, the Washington COG's fair share housing formula was originally adopted in January 1972¹⁷⁴ to promote a wider range of housing opportunities throughout the metropolitan area. Its primary function has provided a basis for development of a regional consensus on the distribution of federal housing subsidies.

Throughout the United States, fair share housing formulas have most often been used to persuade reluctant suburbs to accept a reasonable proportion of the low and moderate income housing demand within a metropolitan area.¹⁷⁵ The factors and relationships used in these formulas can vary widely. The Miami Valley (Ohio) Regional Planning Commission increased the percentage of assisted housing located in the suburbs of Dayton from five to almost fifty percent between 1970 and 1975.¹⁷⁶ The Metropolitan Council of the Twin Cities (Minnesota) saw an increase from twelve to eighteen percent outside the core cities between 1972 and 1975.¹⁷⁷

The situation in the Washington area differs dramatically from regions such as Hartford, Connecticut, where the central city sued its

173. METROPOLITAN WASHINGTON COUNCIL OF GOVERNMENTS, PROPOSAL FOR A METROPOLITAN GROWTH POLICY PROGRAM (1975).

174. METROPOLITAN WASHINGTON COUNCIL OF GOVERNMENTS, FAIR HOUSING AFFIRMATIVE ACTION PLAN: A GUIDE FOR THE WASHINGTON METROPOLITAN AREA (1972).

175. See D. LISTOKIN, FAIR SHARE HOUSING ALLOCATION 27-86 (1976).

176. *Id.* at 125.

177. HUD, NEWS RELEASE ON HOUSING OPPORTUNITY PLANS AWARDED SUPPLEMENTAL SECTION 8 RENTAL SUBSIDY FUNDS (Aug. 30, 1976).

suburbs for failing to accept their share of low and moderate income housing.¹⁷⁸ The Washington COG's member governments actively compete for the available federal housing funds, which they view as scarce and valuable resources. According to the COG:

The major problem encountered in continuing implementation of the Fair Share Plan in the Washington Metropolitan area has not been one of encouraging local governments to participate, since most jurisdictions view their Fair Share target percentage as an 'entitlement' figure. Rather, the problem is one of insufficient Federal housing subsidies to allocate through the Plan.¹⁷⁹

The present Fair Share Plan consists of three components: (1) a statement of guiding principles, (2) an allocation formula, and (3) a set of annually updated implementation procedures. The fair share principles give policy guidance and identify long term goals:

- All residents of a local jurisdiction should have the opportunity to be accommodated in housing units which are comfortable, safe, and sanitary.
- All residents of a local jurisdiction should have the opportunity to be accommodated in housing units of adequate size.
- Those persons who work in a local jurisdiction should have the opportunity to live there if they so desire.
- The number of households which should be accommodated in a local jurisdiction should be limited to those which could feasibly be absorbed in the jurisdiction, in terms of the amount of vacant land or unutilized housing stock in the jurisdiction.
- The number of low and moderate income households located in a local jurisdiction should be proportionate to the jurisdiction's ability to pay for the needed public services which accompany these units.
- Low and moderate income housing should be located within easy access of job opportunities.
- Overconcentrations of low and moderate income housing should be avoided.¹⁸⁰

The *Housing Assistance Allocation Formula* provides the target percentage of federal housing subsidies to be used in each of the

178. *City of Hartford v. Hills*, 408 F. Supp. 889 (D. Conn. 1976).

179. METROPOLITAN WASHINGTON COUNCIL OF GOVERNMENTS, *THE WASHINGTON METROPOLITAN AREA'S AREAWIDE HOUSING OPPORTUNITY PLAN 5* (1976).

180. *Id.* at 1-2.

COG's member jurisdictions. The current formula is the average of the percentage of four factors:

1. *housing need characteristics*, as measured by 1970 census data on overcrowding (number of units with more than 1.5 persons per room), deficient units (number lacking some or all plumbing), and overpayment for rent (number of households paying twenty-five percent or more for rent).
2. *1972 distribution of lower income employment*, another need indicator, calculated with data from COG's 1968 home interview survey on income of full time workers by at-place-employment (to establish relationships between Standard Industrial Classification (SIC) groups and income characteristics) applied to data from COG's 1972 Regional Employment Census.
3. *distribution of 1968-1972 increase in lower income employment*, an indication of job opportunity change as determined by the difference in lower income jobs by jurisdiction between 1968 and 1972.
4. *an inverse proportion of lower income housing units*, designed to avoid undue concentrations by assessing the existing amount of lower income housing from the 1970 Census in each member jurisdiction as a percentage of its total housing stock, and then applying standard interval multipliers to those jurisdictions whose lower income housing is less than fifty percent of their total stock.¹⁸¹

The resulting formula is:

$$\frac{\text{Housing Need (\%)} + \text{Lower Income Employment (\%)} + \text{Increase in Lower Income Employment} + \text{Concentration of Lower Income Housing (\%)}}{4} = \text{Fair Share Target}^{182}$$

The formula provides a target percentage of lower income housing subsidies for each member jurisdiction.

The *implementation procedures* are developed annually to coincide with that fiscal year's allocation of federal housing subsidy funds to the Washington area. The process involves close cooperation between the COG, the Washington HUD area office, and the individual local governments to transform the fair share targets from a paper plan to funded projects. This process follows six steps:

- 1) The Washington, D. C., HUD Area Office formally notifies COG of the total federal housing subsidy contract authority

181. *Id.* at Appendix D: Fair Share Housing Formula Methodology (1976).

182. *Id.*

available to the metropolitan area, identifies any constraints on the use of the contract authority, and requests COG's recommendations on the jurisdictional allocation of these funds in accordance with the Fair Share Plan.

- 2) Proposed recommendations on Fair Share implementation procedures are developed through COG's Housing Technical Committee, Human Resources Policy Committee and Human Resources Citizen Advisory Committee for consideration by the COG Board of Directors.
- 3) The COG Board of Directors reviews the proposed recommendations, enacts amendments as deemed appropriate, and adopts the implementation procedures through a formal resolution.
- 4) The Board of Directors' resolution is formally transmitted to the Washington, D.C., HUD Area Office for concurrence.
- 5) The HUD Area Office agrees to honor the COG Board's recommendations to the maximum extent possible in approving the commitment of contract authority for programs and projects in each of COG's member jurisdictions.
- 6) The implementation procedures adopted by the COG Board of Directors are utilized as a basis for the preparation of COG's Metropolitan Clearinghouse A-95 review comments on all appropriate housing projects which propose the use of federal subsidy funds. In addition, since the advent of the Community Development Block Grant Program, the Fair Share implementation procedures have served as a basis for review of housing assistance goals contained in local Housing Assistance plans.¹⁸³

Following acceptance of the COG's recommendations by the HUD Area Office, concerted action is taken to ensure that acceptable applications are developed, that subsidy funds are committed by HUD, and that housing assistance is ultimately provided. Responsibility for followthrough on the Fair Share Plan is shared by all parties concerned in a remarkably cooperative spirit, demonstrating that a voluntary membership COG can engage in effective growth management even without direct regulatory powers.

B. *Affirmative Action Housing Plan*

In addition to its Fair Share Housing Plan, the Washington COG has developed a number of complementary programs: (1) a Fair

183. See note 179 *supra*.

Housing Affirmative Action Plan,¹⁸⁴ (2) a demonstration Minority Real Estate Career Development and Advancement Program, (3) a work program on residential displacement caused by public development activities, including an annual metropolitan replacement housing demand survey, and (4) a computerized Subsidized Housing Information file containing data on all federally assisted and public housing in the metropolitan area.

The Fair Housing Affirmative Action Plan contains a comprehensive strategy that includes the parties to all transactions involved in the rental, sale, and financing of housing units in a voluntary, cooperative program to promote the concept of equal housing accessibility. Its specific goals are:

- To ensure the availability of all housing on a non-discriminatory basis, including the elimination of "institutional" practices which tend to be discriminatory in effect;
- To inform minority residents of the availability of housing in areas in which they might not ordinarily look for housing, and to encourage them to seek housing in such areas;
- To educate the entire metropolitan community as to everyone's right to live wherever he or she chooses, and the desirability of heterogeneous communities; and
- To develop mechanisms through which progress toward these goals can be systematically measured.¹⁸⁵

The basic thrust of the Affirmative Action Plan is to ensure availability of housing to all persons regardless of race, color, religion, or national origin. In addition, the Plan seeks equal accessibility to housing for all persons, regardless of sex, marital status, age, or number of children.¹⁸⁶ The Plan covers all types of housing rental, sale and financing activities including advertising, marketing, office procedures, training and employment of housing and home finance industry personnel, and public and private assistance and enforcement programs.¹⁸⁷

Participating parties are local governments, associations and individual members of the housing industry and financial institutions, the U. S. Department of Housing and Urban Development, private and

184. METROPOLITAN WASHINGTON COUNCIL OF GOVERNMENTS, FAIR HOUSING AFFIRMATIVE ACTION PLAN: A GUIDE FOR THE WASHINGTON METROPOLITAN AREA (1974).

185. *Id.* at 3-4.

186. *Id.*

187. *Id.*

public interest groups, and members of the metropolitan community. For each party, specific recommendations for affirmative action are provided, along with model agreements for use by professional associations and individual firms, in concert with local governments and HUD. Practices are recommended for equal housing opportunity advertising, employee recruitment and training, setting eligibility and application criteria, and standardizing monitoring and report procedures.¹⁸⁸

The growth management program of the Metropolitan Washington COG is a significant illustration of what can be done by an innovative COG to influence development. The tools it has created for cooperative forecasting, impact assessment, and action programs are important prototypes for regional agencies throughout the country. Its proposed use of negotiated agreements, not only for housing policy but also for federal agency locations, wastewater treatment, solid waste disposal, and other metropolitan issues, represents a very important advance in the conceptual foundation of regional equity.

Regional planning practice in several other areas has also pioneered the development of concepts and tools for achieving regional equity. Space does not permit description of these other innovative efforts here, but one of the leading examples is the Twin Cities Metropolitan Council.¹⁸⁹ Its use of the concept "metropolitan significance"¹⁹⁰ to identify those functions of concern to the Council, its effective fair share housing policy, and its framework plan for public facilities and services are important advances in introducing regional equity factors into regional growth guidance.

IV. CONCLUSION: PROSPECTS FOR REGIONAL EQUITY

In the final analysis regional equity is a concept much broader than simply a means to provide more lower cost housing. It is a matter of fairness in the regional distribution of, and opportunities for access to, developed urban land. Under an equitable system, all regional

188. *Id.*

189. See RESPONSIBLE GROWTH MANAGEMENT, *supra* note 65, at ch. 18. See generally P. RICHERT, GROWTH MANAGEMENT IN THE TWIN CITIES METROPOLITAN AREA: THE DEVELOPMENT FRAMEWORK PLANNING PROCESS (1976); R. FREILICH & J. RAGSDALE, A LEGAL STUDY OF THE CONTROL OF URBAN SPRAWL IN THE MINNEAPOLIS-ST. PAUL METROPOLITAN REGION (1974).

190. MINN. STAT. ANN. § 473.173 (West 1971). The Council has the power to review "any proposed matter" within its jurisdiction to determine whether that proposal is of "metropolitan significance." *Id.*

residents should have a reasonable opportunity to live, work, and use public facilities such as roads, sewers, schools, and parks at the regional locations of their choice. Thus, regional allocation of developed urban land, including its supporting public services, is a crucial issue for regional equity.

Traditionally, intervention into the private land development process has been a concern only of individual local governments, who are delegated power by the state to regulate development. Increasingly, it has been recognized that enhancement of the local welfare alone may have undesirable effects on neighboring communities and might exclude those who desire to move into a particular locality. In other words, furthering the local interest through growth management may subvert the larger regional interest, unless a concern for regional equity is placed in the forefront of all local actions.

Three significant forces encourage expansion of local growth management to encompass a regional perspective. Federal and state policy initiatives, progressive state court decisions, and innovative work by regional councils combine to establish regional equity as a viable and forceful concept.

There are still a number of unanswered questions concerning the future of regional growth management. How long will it be before the notion of regional responsibility for growth management is balanced by a corresponding expansion of regional authority? What is the local governmental reaction to the federal and state push for a regional perspective on development decisions? What strategies can regional councils employ to increase the effectiveness of their growth guidance planning and implementation process? Increasing delegation of responsibilities to regional councils typically is not associated with a corresponding delegation of authority. While federal intervention in regionalism has been described as transforming "... area-wide confederalism from a wholly independent undertaking to a largely federally financed surrogate for metropolitan government,"¹⁹¹ few regional councils have any governmental powers or operating responsibilities. Without authority to compel participation or implementation of its decisions a regional council must rest on the good will of constituent local governments for its existence, and rely on consensual decisionmaking to facilitate rather than enforce resolution of areawide issues. It must spend much energy on procedural efforts to balance demands for local independence with needs from area-

191. REGIONAL DECISION MAKING, *supra* note 3, at 52.

wide interdependence. It must make the best of whatever limited authority participating jurisdictions, collectively or individually, will allow.

Prospects for an immediate turnaround in these constraints are slim. So far, the regional general welfare concept has only been accepted by the courts of five states: New Jersey, New York, Pennsylvania, Michigan, and California. Current federal and state policy initiatives are still only proposals; none has yet been adopted. The number of regional councils able to deal effectively with regional equity issues is greatly outnumbered by the number of regional councils that have done little or nothing on this front. Realistically, we would expect regional responsibilities to be greater than formal regional powers for many years to come.

Given a planning environment where regional formal authority is minimal, what is the likely response of local governments to these regional councils attempting to develop and implement a viable growth management planning process through federal support? Here again, the prospects are sobering. The realities of the local political process ensure that any attempts by state or federal governments to increase regional council authority will be resisted by local governments who feel a threat to their autonomy. Yet without authority, the effectiveness of regional efforts is open to question.

Without formal authority, there may be alternate means to increase the legitimacy or power of a regional agency. This appears to be one of the most promising areas for study. Advances by regional councils such as the Washington COG suggest that it is possible to do a great deal with minimal authority when the proper decision environment is created and when maximum use is made of informal coordination and negotiation, along with focused analyses of regional information and timely response to development issues. If backed up with new federal or state authority, these advances could be further amplified.

Beyond a few case studies, little attention has been directed toward systematically assessing the effectiveness of regional planning and growth management. Often policymakers assume that local and state governments are basically supportive of regional councils, only requiring the right federal funding "carrot" to actively support the regional perspective. This assumption fails to confront political realities associated with regional planning: the question of state versus local control, the shifts in power relationships that will be necessary to establish authoritative regional councils and, therefore, the vested

interest of both state and local government in seeing that regional councils do not acquire too much authority or become too effective.

Despite these admittedly serious problems, we are cautiously optimistic about the emerging thrust toward recognizing regional equity as a key feature in decisions on growth and development. There is evidence from places like the Metropolitan Washington Council that regional agencies can go a long way toward overcoming their lack of authority by using their coordinative mandate in a creative and aggressive fashion. There is heartening activity in federal circles that shows a willingness to devise new program and legislative initiatives in support of regional growth management. And finally, there is the threat of legal challenge to inspire lagging areas to recognize that areawide planning and development guidance can be both a legally defensible and a constitutionally responsible means to achieve regional equity.

THE GRAND SLAM GRAND CENTRAL TERMINAL DECISION: A *EUCLID* FOR LANDMARKS, FAVORABLE NOTICE FOR TDR AND A RESOLUTION OF THE REGULATORY/ TAKING IMPASSE †

NORMAN MARCUS*

Historic conservation is but one aspect of the much larger problem, basically an environmental one, of enhancing—or perhaps developing for the first time—the quality of life for people.¹

I

INTRODUCTION

Thirteen years after New York City adopted its Landmarks Preservation Law² and after “all 50 states and over 500 municipalities [had] enacted laws to encourage or require the preservation of buildings and areas with historic or aesthetic importance,”³ a conservative Supreme Court upheld the application of New York City’s ordinance to Grand Central Terminal (Terminal), very much in the spirit and manner in which it sanctioned zoning more than 50 years ago.⁴ The Court rejected a claim that the ordinance’s application resulted in a “taking” of property without due process in violation of the fourteenth amendment. In so doing, the Court explicitly recognized for the first time the

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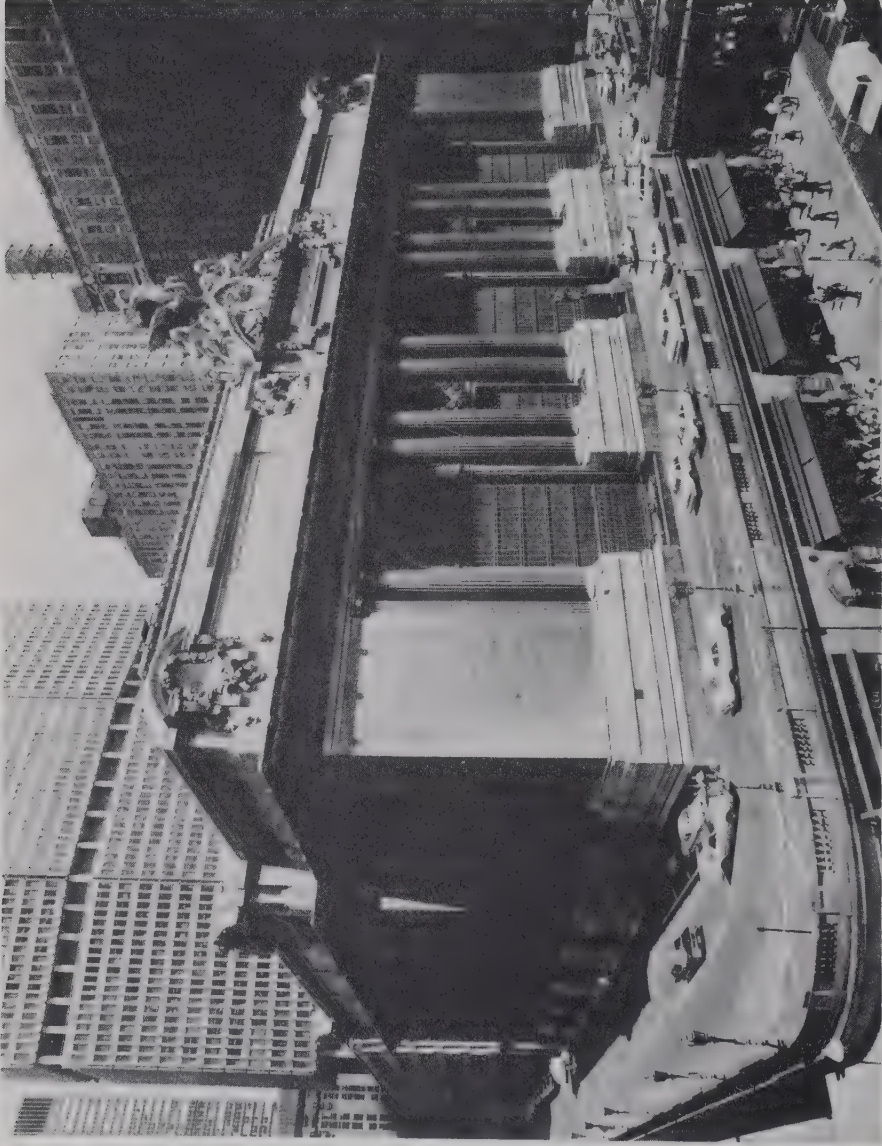
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1. Penn Central Transp. Co. v. New York City, 98 S. Ct. 2646, 2651 (1978).

2. New York City Charter and Administration Code ch. 8-A §§ 205-1.0 to 207-21.0 (1976).

3. 98 S. Ct. at 2651.

4. A conservative United States Supreme Court sanctioned classic zoning in Village of Euclid v. Ambler Realty Co., 272 U.S. 365 (1976), by a vote of 6-3, the same margin as in Penn Central. The majority in Penn Central were Justices Brennan, Stewart, White, Marshall, Powell and Blackmun. Justice Rehnquist was joined in his dissent by Chief Justice Burger and Justice Stevens.



GRAND CENTRAL TERMINAL

Midtown Manhattan zoning provisions allow tall buildings with floor area ratios many times that of Grand Central Terminal. The Terminal's designation as a New York City landmark restricted Penn Central Railroad's exploitation of these valuable "air rights."

Photo: Adriana R. Kleiman

value of transferable development rights (TDR),⁵ thus opening the door to a resolution of the regulatory/taking impasse⁶ which had inhibited local governments from exercising their police power to preserve threatened resources. These zoning privileges mitigate the harshness of a land use regulation's impact on a property owner.

The Court also, for the first time, gave broad and explicit encouragement to the accelerating preservation movement in the United States.⁷ This encouragement principally took the form of dispelling the inverse condemnation cloud which threatened municipalities with having to buy landmarks in order to preserve them. The decision was hailed as an example of "maturity" on the part of a "country that is finally recognizing its urban assets and the need to protect them for livable cities."⁸ Ironically, preservation—arguably a more conservative municipal objective than separation of uses—took 50 years longer to satisfy concerns stemming from the fifth and fourteenth amendments' protection of private property from taking without just compensation before assuming its place beside zoning as a valid exercise of the police power.

II

THE CASE: PENN CENTRAL TRANSP. CO. v. NEW YORK CITY⁹

A. Background

In 1965, New York City enacted its Landmarks Preservation

5. Zoning controls define the development potential of a lot. New York City's Zoning Resolution allows a certain height, bulk, and density for structures on each lot proportionate to the size of the lot and appropriate to its location. Owners are economically encouraged to build to the allowable maximum and will often destroy an existing structure that does not utilize the permitted bulk of a lot in an area zoned for high density. In order to preserve a threatened critical resource, however, it is necessary to divert the development pressure elsewhere. By allowing transfer of development rights from a lot with an important resource to eligible receiving lots within a wider unit of development control, the city achieves its density-infrastructure balance, preserves its "landmark", and gains the increment to its tax base associated with new development. See Marcus, *Air Rights Transfers in New York City*, 36 L. CONTEMP. PROB. 372 (1971) [hereinafter cited as Marcus, *Air Rights*]; Marcus, *From Euclid to Ramapo: New Directions in Land Development Controls*, 1 HOFSTRA L. REV. 56, 72-78 (1973).

6. See Costonis, *Fair Compensation and the Accommodation Power: Antidotes for the Taking Impasse in Land Use Controversies*, 75 COLUM. L. REV. 1021 (1975).

7. Gilbert, *Precedents for the Future*, 36 L. & CONTEMP. PROB. 311, 312 (1971) (quoting address by Robert Stipe, 1971 Conference on Preservation Law, Washington, D.C., May 1, 1971-unpublished text at 6-7).

8. Huxtable, *A 'Landmark' Decision on Landmarks*, N.Y. Times, July 9, 1978, § 2, at 21, 24.

9. 98 S. Ct. 2646 (1978).

Law,¹⁰ nine years after the New York State Historic Preservation Enabling Act granted municipalities authority to provide for the protection and preservation of buildings and places of "special historical or aesthetic interest or value."¹¹ Under New York City's law, the Landmarks Preservation Commission (Commission) identifies and, after public hearings, designates as landmarks and historic districts those properties and areas having "special character or special historical or aesthetic interest or value as a part of the development, heritage or cultural characteristics of the city, state or nation."¹² Following such action, the Board of Estimate, the city's legislative body, may modify or overturn the designation after it considers a report from the City Planning Commission on the relationship of the designated property "to the master plan, the Zoning Resolution, projected public improvements, and any plans for the renewal of the area involved."¹³

After a landmark designation is recorded under the city statute, any alteration, reconstruction, demolition, or construction on a landmark site requires prior approval by the Commission.¹⁴ To assure that the law's objectives will not be defeated by deterioration, the law also requires that the owner keep the exterior features of the building in good repair.¹⁵

On September 21, 1967, the Board of Estimate confirmed the Landmarks Preservation Commission's designation of the Terminal as a landmark. Shortly thereafter, a private developer obtained from the owner, Penn Central Railroad (Railroad), a renewable 50 year lease of the air rights above the Terminal. The Commission subsequently denied two requests from the developer and the Railroad for permission to construct on the Terminal site a high rise office building which was not precluded by applicable zoning provisions.¹⁶ Justice Brennan

10. New York City Charter and Administrative Code ch. 8-A §§ 205-1.0 to 207-21.0. Justice Brennan's majority opinion noted that the "New York City Law is typical of many urban landmark laws in that its primary method of achieving its goals is not by acquisition of historic properties, but rather by involving public entities in land use decisions affecting these properties and providing services, standards, controls and incentives that will encourage preservation by private owners and users." 98 S. Ct. at 2652. The opinion goes on to make the case for private use as opposed to public administration of most urban landmarks:

The consensus is that widespread public ownership of historical properties in urban settings is neither feasible nor wise. Public ownership reduces the tax base, burdens the public budget with costs of acquisitions and maintenance and results in the preservation of public buildings as museums and similar facilities, rather than as economically productive features of the urban scene.

Id. at 2652 n.6. See photograph of Terminal interior, p. 734 *infra*.

11. N.Y. GEN. MUN. LAW § 96-a (McKinney 1977).

12. New York City Charter and Administrative Code ch. 8-A § 207-1.0(n) (1976).

13. *Id.* § 207-2.0(g)(1).

14. *Id.* § 207-4.0 to -9.0.

15. *Id.* § 207-10.0.

16. New York City Zoning Resolution, *passim*.



GRAND CENTRAL TERMINAL

Photo: Adriana R. Kleiman

In contrast to public ownership which results in the preservation of public buildings as museums, preservation by private owners maintains landmarks as economically productive features of the urban scene.



PART OF 42ND STREET FACADE

Photo: Adriana R. Kleiman

The Chester French Statuary would have been torn down had the second office tower request by the Railroad been approved by the Landmarks Preservation Commission.

quoted the Commission's rationale for rejecting the more benign of the two office building requests¹⁷ as follows:

The Commission has no fixed rule against making additions to designated buildings—it all depends on how they are done. . . . But to balance a 55-story office tower above a flamboyant Beaux-Arts facade seems nothing more than an aesthetic joke. Quite simply, the tower would overwhelm the Terminal by its sheer mass. The “addition” would be four times as high as the existing structure and would reduce the landmark itself to the status of a curiosity. Landmarks cannot be divorced from their settings—particularly when the setting is a dramatic and integral part of the original concept. The Terminal, in its setting, is a great example of urban design. Such examples are not so plentiful in New York City that we can afford to lose any of the few we have. And we must preserve them in a meaningful way—with alterations and addition of such character, scale, materials, and mass as will protect, enhance, and perpetuate the original design rather than overwhelm it.¹⁸

The Railroad did not seek judicial review of either the Terminal's landmark status or the denial by the Commission of the two requests.¹⁹ Nor did it submit other building plans for the Commission's consideration.²⁰ Instead, in October 1969 the Railroad filed for declaratory judgment invalidating the restrictions imposed by the Landmarks Preservation Law. It sought injunctive relief barring the city from using the law to impede construction of any structure otherwise lawful on the Terminal site, and damages for the “temporary taking” between the designation date and the date of granting of relief.²¹

To appreciate the Railroad's perspective, one must view the Terminal's status in light of the city's then landmark-blind zoning policy which encouraged high rise redevelopment in midtown Manhattan.²² Permissive midtown Manhattan zoning controls, allowing a Floor Area Ratio (FAR)²³ greater than in any other area of the city, invite concen-

17. The second and less benign of the two office building requests called for tearing down a portion of the Terminal that includes the 42nd Street facade. 98 S. Ct. at 2656. See photograph of statuary, p. 735 *supra*.

18. 98 S. Ct. at 2656. See also, Marcus, *Villard Preserv'd: Or, Zoning for Landmarks in the Central Business District*, 44 BROOKLYN L. REV. 1, 17 (1977).

19. 98 S. Ct. at 2656.

20. *Id.* at 2657. At the oral argument, Justice Blackmun asked if the Railroad had any interest in building the 20 story beaux-arts office tower designed but never built as part of the Terminal complex in 1913. Counsel for the Railroad indicated that the Railroad had no current interest in the 1913 office tower design. The majority found this significant in examining the effect of the landmarks law on the use of the air rights above the Terminal. *Id.* at 2666 n.34 and accompanying text.

21. *Id.* at 2657.

22. See note 5 *supra*.

23. FAR is a concept which is used to control the amount of building on a lot. The FAR “number” represents the multiple of the lot area which produces the maximum allow-

tration of development in an area containing a dense service infrastructure of shops, theatres, restaurants, and transit facilities. The income potential of a large, new building utilizing the maximum FAR available far exceeds that of a more modestly sized landmark structure.²⁴ Additionally, older specialty buildings like Grand Central Terminal require costly and tender care for the continued preservation and cleaning of elaborate beaux-arts facades and ornamentation. While incentive zoning granted bonus floor area to developers in return for additional open space and circulation amenities, landmark preservation brought no reward. In the context of these development controls, owners were unenthusiastic about midtown Manhattan landmark designations.²⁵

The New York City Planning Commission and the Board of Estimate, at the urging of the Landmarks Preservation Commission, took steps to correct this landmark-blind zoning policy. Chief among these measures was a 1968 amendment to the Zoning Resolution which granted TDR options²⁶ to all city landmarks.²⁷ In order to allow the owner to capture the full zoning value of his lot without destroying the landmark, TDR options permit the owner to transfer development rights from the landmark site to other lots. Under the 1968 scheme, developers of eligible receiving lots could purchase additional floor area up to 20% over the district FAR maximum. Eligible receiving lots included only lots adjacent to or across a street or street intersection from the landmark.²⁸

In 1969, the Railroad persuaded the city to approve broadened TDR enabling legislation.²⁹ The Railroad desired to transfer at least 50% of its unutilized development rights above Grand Central Terminal to the then unprofitable Biltmore Hotel site—one of many properties owned by the Railroad in the vicinity of the Terminal. The city amended its initial TDR legislation to make possible a greater radius of transferability³⁰ and to remove, within the Manhattan central business district, the 20% FAR coverage ceiling on an individual receiving lot.³¹

able floor area in the development. A developer may typically construct an FAR 18 building by including a plaza (public open space) on a site in this area without the need to obtain a single discretionary approval from the city. New York City Zoning Resolution, Article III, Commercial District Regulations, §§ 31-00 to 38-26.

24. The Terminal has an FAR of 2 in a district where the allowable FAR is 18. *Id.*

25. Marcus, *supra* note 18, at 10.

26. See note 5 *supra*.

27. New York City Zoning Resolution, §§ 74-79 to -793.

28. Marcus, *Air Rights*, *supra* note 5, at 374. The rationale of this early TDR provision was to maintain a bowl or saucer of light and air with adjacent properties on its rim and the older landmark at the bottom of the bowl.

29. *Id.* at 375.

30. New York City Zoning Resolution, 74-79 to -793.

31. *Id.* Existence of an extensive underground circulation network beneath the rail-

This would permit the Railroad to carry out its massive Biltmore redevelopment scheme for which its architect, Marcel Breuer, developed drawings of equal detail to those worked up for proposals on the Terminal site.

After the legislation was adopted, however, the heretofore booming market for office space in midtown Manhattan produced a glut of unrentable floor space,³² and the Railroad ceased work on the Biltmore project. It thereafter placed reliance on lawyers rather than architects and pursued its interest exclusively in the courts.

B. The Lower Court Decisions

Grand Central Terminal posed a major test for the City's Landmarks Preservation Law at each level of judicial consideration. If the designation of a relatively small structure in the high-value, high-rise office retail core of the city could be sustained, the Landmarks Preservation Law was probably safe anywhere in the city.

The trial court, impressed by the disparity between the Terminal's existing floor area and the zoning potential for an office building on the site, granted declaratory and injunctive relief against the city. It found that the cost of operating the Terminal exceeded its revenues from tenants and concessionaires and did not regard the transferable development rights either as providing compensation to the Railroad or as minimizing the harm suffered as a result of the landmark designation.³³

The Appellate Division reversed, three to two.³⁴ It concluded that the Railroad, having shown only that it had been deprived of the property's most profitable use, did not sustain the burden of proof required by its constitutional taking claim—i.e. that the regulation deprived the Railroad of all reasonable beneficial use of its property. The court found support for this conclusion in the Railroad's failure to impute rental value to the vast portions of the Terminal devoted to railroad purposes and in its failure to show that the unused development rights above the Terminal could not have been profitably transferred to nearby sites.³⁵

road properties in the Terminal vicinity which when improved would ameliorate the impact of shifted densities was thought to excuse departure from the earlier "bowl" theory underlying the initial TDR legislation. Marcus, *Air Rights*, *supra* note 5, at 375.

32. There was a drastic decline in the number of new office development zoning applications processed by the New York City Planning Commission at this time which the Commission attributed to an overabundance of office space already available on the market.

33. 98 S. Ct. at 2657 n.20.

34. *Penn Central Transp. Co. v. City of New York*, 50 App. Div. 2d 265, 377 N.Y.S.2d 20 (1975).

35. The U.S. Supreme Court majority read the trial record in this regard to "reflect that Penn Central had given serious consideration to transferring some of those [development] rights to either the Biltmore or the Roosevelt Hotel." 98 S. Ct. at 2657 n.22.

The Court of Appeals unanimously affirmed on all the grounds given by the Appellate Division, but viewed the "reasonable beneficial use-reasonable return on the property" question in a new light.³⁶ The reasonable return to which plaintiffs were entitled in the Court of Appeal's neo-Henry Georgian perspective³⁷ could only come on the "privately created and privately managed ingredient" of the Terminal's value.³⁸ Rather than attempt to wrestle with this unwelcome and, in the Supreme Court's view, unnecessary Henry George genie, the Brennan majority in a footnote politely but firmly rebottled the genie with the following procedural flourish:

The Court of Appeals suggested that in calculating the value of the property upon which appellants were entitled to earn a reasonable return, the "publicly-created" components of the value of the property—i.e. those elements of its value attributable to the "efforts of organized society" or to the "social complex" in which the Terminal is located—had to be excluded. However, since the record upon which the Court of Appeals decided the case did not, as that Court recognized, contain a basis for segregating the privately created from the publicly created elements of the value of the Terminal site and since the judgment of the Court of Appeals in any event rests upon bases that support our affirmance, see *infra*, we have no occasion to address the question whether it is permissible or feasible to separate out the "social increments" of value of property.³⁹

The Georgian genie of "social increments" of the value of property, while not determining the outcome of the Grand Central Terminal litigation, thus remains prominently on the shelf for a future Aladdin in the judicial process to uncork.

C. The Supreme Court Decision

The questions presented to the Court were: 1) whether the restric-

36. Penn Central Transp. Co. v. City of New York, 42 N.Y.2d 324, 366 N.E.2d 1271, 397 N.Y.S.2d 914 (1977).

37. Henry George, a nineteenth century American economist, developed the "single [social value] tax" theory in his major work, *PROGRESS AND POVERTY* (1879), where he sought to unravel the paradox of progress accompanied by poverty, and to stop the cycle of economic booms and depressions. In this quasi-Marxist work, he proposed a land value tax which replaced all other forms of taxation in order to permit the public rather than private interests to capture the land value increments. This would provide ample public funds to insure adequate wages and purchasing power for labor and a source of public capital for investment purposes. In essence, land value would be publicly enjoyed, although private title and management would remain nominally intact. George believed this "single tax" would free the economic system from periodic shortages of purchasing power and capital thereby eliminating depressions, in addition to providing for a fairer distribution of wealth. See also H. GEORGE, *THE SCIENCE OF POLITICAL ECONOMY* (1897); H. GEORGE, JR., *THE LIFE OF HENRY GEORGE* (1900).

38. Penn Central Transp. Co. v. City of New York, 42 N.Y.2d at 328, 366 N.E.2d at 1275, 397 N.Y.S.2d at 916.

39. 98 S. Ct. at 2658 n.23.

tions imposed by the Landmarks Preservation Law upon the Railroad's exploitation of the landmarked Terminal site effect a taking of property for a public use within the meaning of the fifth and fourteenth amendments, and 2) if so, whether the transferable development rights afforded the landmark owner constituted just compensation within the meaning of the fifth and fourteenth amendments.⁴⁰ The court majority answered the first question in the negative, thereby failing to reach the second.⁴¹ The minority answered the first question affirmatively, and would have remanded the second question to the New York Court of Appeals because of the "relatively slim" record on appeal for a determination of whether these privileges constituted a "full and perfect equivalent for the property taken."⁴²

Penn Central presented the Court with its first opportunity to apply prior taking analyses to landmark preservation efforts—an important nationwide concern—in the context of ameliorative TDR privileges. Although the "taking issue" had been before the courts frequently in the 1900's in the context of federal, state, or local police power measures that caused substantial adverse impact on private property,⁴³ including state health and safety regulations,⁴⁴ local comprehensive zoning ordinances,⁴⁵ local environmental protection statutes,⁴⁶ and national clean air requirements,⁴⁷ landmark preservation regulation presented a *sui generis* public purpose.⁴⁸ In assessing the validity of the New York City Law as applied to the Terminal, the Court drew upon all of these precedents before forging what amounts to a landmark decision for landmarks. The decision, a green light for landmark preservation across the nation, clearly shields landmark regulation of similar character to New York City's from generic taking

40. *Id.* at 2658.

41. The Court nonetheless found opportunity to note the importance of the Railroad's TDR privileges in mitigating the economic impact of the Landmarks Preservation Law's restrictions on the Terminal. 98 S. Ct. at 2666.

42. *Id.* at 2673 (Rehnquist, J., dissenting).

43. F. Bosselman, D. Callies, & J. Banta, *The Taking Issue* (1973) (unpublished work written for the Council on Environmental Quality).

44. *Pennsylvania Coal Co. v. Mahon*, 260 U.S. 393 (1922).

45. *Village of Euclid v. Ambler Realty Co.*, 272 U.S. 365 (1926).

46. *Just v. Marinette County*, 56 Wis. 2d 7, 201 N.W.2d 761 (1972).

47. *South Terminal Corp. v. EPA*, 504 F.2d 646 (1st Cir. 1974). For a discussion of taking without compensation in the context of federal preemption of local planning options, see Marcus, *Clean Air in Search of a Comprehensive National Plan: An Urban View*, 8 *THE URBAN LAWYER* 307, 318-23 (1976).

48. See J. COSTONIS, *SPACE ADRIFT* 5 (1974). Under a photograph of happy citizens appears the following caption: "Why Preserve Old Buildings? The elation of the citizens of Belleville, Ill. at the instant their city council approved an ordinance designating the St. Clair County Courthouse as a landmark offers as persuasive an answer as any. Aside from its architectural distinction, *the courthouse was a source of identity, of familiarity, of roots for more than five generations of Bellevilleans.* . . ." (emphasis added).

challenges, just as *Euclid v. Ambler Realty Corp.*⁴⁹ provided a broad umbrella for states and localities to zone their communities in accordance with a comprehensive plan.

Beginning its taking analysis with disarming candor in response to critics,⁵⁰ the Court confessed its past inability to develop a set formula to determine when "justice and fairness" require that the government compensate persons for economic injuries caused by public action rather than allow the loss to fall disproportionately on a few persons.⁵¹ The Court admitted engaging in essentially ad hoc factual inquiries in past cases, but was able to identify three tell-tale factors any one of which could convert an apparently valid "public program adjusting the benefits and burdens of economic life to promote the common good"⁵² into an unconstitutional taking. Thus:

- 1) A government restriction on real property "not reasonably necessary to the effectuation of a substantial public purpose" may constitute a "taking"⁵³ (i.e. arbitrariness).
- 2) A government restriction may have such "an unduly harsh impact on the owner's use of the property"⁵⁴ or "may so frustrate distinct investment-backed expectations as to amount to a 'taking'"⁵⁵ (i.e. harshness).
- 3) "Government actions that may be characterized as acquisitions of resources to permit or facilitate uniquely public functions have often been held to constitute 'taking'"⁵⁶ (i.e. appropriation).

This comprehensive evaluation framework is responsive to past criticism that the Court conveniently applied police power and eminent domain labels haphazardly to support result-oriented determinations. Even though the challenged measure survives two out of the three evaluative criteria, it may still founder on the third.⁵⁷ A critical review of the three elements with specific application to the Grand Central Terminal situation is presented below.

1. *Arbitrariness*

A government police power restriction is arbitrary under the Court's reasoning if there is either an insufficient public purpose being

49. 272 U.S. 365 (1926).

50. See Costonis, *supra* note 6, at 1033-49; Costonis, *The Disparity Issue: A Context for the Grand Central Terminal Decision*, 91 HARV. L. REV. 402, 408-09 (1977).

51. 98 S. Ct. at 2659.

52. *Id.*

53. *Id.* at 2661.

54. *Id.*

55. *Id.*

56. *Id.*

57. This comprehensive test contrasts with the dissent's doctrinaire view that a taking is a taking: "A taking does not become a noncompensable exercise of police power simply because the government in its grace allows the owner to make some 'reasonable' use of his property." *Id.* at 2672.

pursued or a more reasonable and clearly less restrictive means available to achieve a substantial public purpose.⁵⁸

Although the Railroad did not contest the legitimacy of landmark preservation as a public objective,⁵⁹ it argued that only noxious use prevention could support prohibition of the most beneficial use of property without resulting in a taking. (The Railroad did not consider its proposed office tower over the Terminal to be a noxious use.) In rejecting this view,⁶⁰ the Court positioned the public purpose of landmark regulation alongside the long-sanctioned governmental objectives of zoning—even where this results, as it did in *Penn Central*, in the prohibition of the most beneficial use of the land—by invoking as precedents all of the unsuccessful challenges to zoning regulations that resulted in arguably harsh restrictions.⁶¹

The Railroad's most incisive thrust at the reasonableness of the landmark law's means of achieving its objective was leveled at the law's selective designation methodology as contrasted to uniform zoning classifications which traditionally place all properties in the same general area under common restrictions or burdens.⁶² In response to this

58. See text accompanying note 53 *supra*.

59. The Court reaffirmed its past holdings that "States and cities may enact land use restrictions or controls to enhance the quality of life by preserving the character and desirable aesthetic features of a city." 98 S. Ct. at 2662, citing *City of New Orleans v. Duke*, 427 U.S. 297 (1976); *Young v. American Mini Theatres, Inc.*, 427 U.S. 50 (1976); *Village of Belle Terre v. Boraas*, 416 U.S. 1, 9-10 (1974); *Berman v. Parker*, 348 U.S. 26, 33 (1954); *Welch v. Swasey*, 214 U.S. 91, 108 (1909).

60. The necessary presence of a "noxious use"—a harm to be prohibited so as to benefit the public at large, such as the brickyard in *Hadacheck v. Sebastian*, 239 U.S. 394 (1915) or the sand and gravel pit in *Goldblatt v. Town of Hempstead*, 369 U.S. 590 (1962)—as a condition precedent to justification of a prohibitory land use regulation is interred in this decision. The "noxious" quality of the prohibited uses under this so-called "harm-benefit" test is exposed once and for all by the Court as a semantic chimera:

These cases are better understood as resting not on any supposed "noxious" quality of the prohibited uses but rather on the ground that the restrictions were reasonably related to the implementation of a policy—not unlike historic preservation—expected to produce a widespread public benefit and applicable to all similarly situated property.

98 S. Ct. at 2664 n.30.

61. *Id.* at 2660. The Court stated:

[I]n instances in which a state tribunal reasonably concluded that "the health, safety, morals or general welfare" would be promoted by prohibiting particular contemplated uses of land, this Court has upheld land use regulations that destroyed or adversely affected recognized real property interests. See *Nectow v. City of Cambridge*, 277 U.S. 183, 188 (1928). Zoning laws are of course the classic example. See *Euclid v. Ambler Realty Corp.*, 272 U.S. 365 (1926) (prohibition of industrial use); *Gorieb v. Fox*, 274 U.S. 603, 608 (1927) (requirement that portions of parcels be left unbuilt); *Welch v. Swasey*, 214 U.S. 91 (1909) (height restriction), which have been viewed as a permissible governmental action even when prohibiting the most beneficial use of the property. See *Goldblatt v. Town of Hempstead*, *supra*, 369 U.S. at 592-93 and cases cited; see also *Eastlake v. Forest City Enterprises, Inc.*, 426 U.S. 668, 674 n.8 (1976).

Id.

62. The Railroad conceded the legitimacy of historic districts under a zoning rationale.

criticism, any urban observer might be quick to point out that excellence may occur at random throughout a city as well as in definable clusters or historic districts.⁶³ A regulation which, in order to have district-wide form, unnecessarily burdens a multiplicity of indifferent properties to preserve an isolated landmark or two, might be even more vulnerable to an "arbitrariness" challenge on the ground that there is available a more reasonable and clearly less restrictive means of achieving its purpose. The Railroad argued, however, that selective, isolated landmark designations burden only the designee and provide windfalls to neighboring properties.⁶⁴ They fail to produce the "average reciprocity of advantage"⁶⁵ of zoning restrictions which, while limiting future use of many commonly situated properties and diminishing their individual value in the abstract, give rise to reciprocal collective advantage flowing from the security of common restrictions. In the Court's view, however, the legislative judgment that the preservation of landmarks benefits all New York citizens and all structures, both economically and by improving the quality of life in the city as a whole, prevails over the Railroad's contention that it alone was burdened and unbenefitted.⁶⁶

Addressing the potential for discriminatory application in spot landmark designation, the Court rejected "taking" as the invariable characterization for laws which single out individual landmark owners for special burdens—a proposition which would "invalidate not just New York City's law, but all comparable landmark legislation in the nation."⁶⁷ The New York Court of Appeals had unanimously concluded that restrictions on the alteration on individual landmarks were not designed to further a general community plan.⁶⁸ The state court found that New York City landmarks law restrictions were designed to

Id. at 2664. See generally N. MARCUS & M. GROVES, *THE NEW ZONING*, ch. 5 (1970).

63. See Marcus, *supra* note 18, at 13.

64. See D. HAGMAN AND D. MISCZYNSKI, *WINDFALLS FOR WIPEOUTS* (1978). *Lutheran Church in America v. City of New York*, 35 N.Y.2d 121, 316 N.E.2d 305, 359 N.Y.S.2d 7 (1974), which overturned a city landmark designation, highlights the helplessness of an isolated property owner, singled out from his neighbors to shoulder the burden of an onerous reverse spot landmark designation. A reverse spot landmark designation is like a zoning land use decision which arbitrarily singles out a particular parcel for different, less favorable treatment than the neighboring ones. See 2 RATHKOPF, *THE LAW OF ZONING AND PLANNING* 26-4 to 26-5 n.6 (2d ed. 1977).

65. *Pennsylvania Coal v. Mahon*, 260 U.S. 393, 415 (1922).

66. 98 S. Ct. at 2665. The Court also noted that the Railroad's belief that it is more burdened than benefited must have been equally true of the property owners in previous zoning cases, *Id.*

67. *Id.* at 2663. The Court noted there may be "a more severe impact on some landowners than on others, but that in itself does not mean that the law effects a 'taking.'" *Id.* at 2664.

68. *Penn Central Transp. Co. v. City of New York*, 42 N.Y.2d at 330, 366 N.E.2d at 1274, 397 N.Y.S.2d at 918.

prevent alteration or demolition of a single piece of property and noted that "such restrictions resemble 'discriminatory' zoning restrictions, properly condemned" ⁶⁹ In the Supreme Court's view, however, the Landmarks Preservation Law and its operation to date reflect a comprehensive plan:

In contrast to discriminatory zoning, which is the antithesis of land use control as part of some comprehensive plan, the New York City law embodies a comprehensive plan to preserve structures of historic or aesthetic interest wherever they might be found in the city, and as noted, over 400 landmarks and 31 historic districts have been designated pursuant to this plan. ⁷⁰

Since the New York Court of Appeals emphasized that the implementation of the objectives of the Landmarks Preservation Law constituted an "acceptable reason to single out one particular parcel for different and less favorable treatment," ⁷¹ the Court majority tactfully did "not understand the New York Court of Appeals to disagree with our characterization of the Act." ⁷² The Court laid the arbitrary "spot" designation methodology issue to rest in a significant footnote:

"It is of course true that the fact the duties imposed by zoning and historic district legislation apply throughout particular physical communities provides assurances against arbitrariness, *but the applicability of the landmarks law to large number of parcels in the city, in our view, provides comparable, if not identical, assurances.*" ⁷³

The Court's willingness to place local legislative judgment, both as to the widespread benefits of landmark preservation and as to the necessary selective determinations, on the same pedestal enjoyed by zoning determinations ⁷⁴ should embolden hitherto timid communities which have hesitated to embark upon a program of individual landmark regulation because of potentially expensive inverse condemnation consequences. Moreover, the Court's language would seem to

69. *Id.*

70. 98 S. Ct. at 2663-64.

71. 42 N.Y.2d at 330, 366 N.E.2d at 1275, 327 N.Y.S.2d at 918. Contrast the U.S. Supreme Court minority's view of such less favorable treatment:

If the cost of preserving Grand Central Terminal were spread evenly across the entire population of the City of New York, the burden per person would be in cents per year—a minor cost appellees would surely concede for the benefit accrued. Instead, however, appellees would impose the entire cost of several million dollars per year on Penn Central. But it is precisely this sort of discrimination that the Fifth Amendment prohibits.

98 S. Ct. at 2672 (Rehnquist, J., dissenting).

72. 98 S. Ct. at 2663-64 n.28.

73. *Id.* at 2665 n.32 (emphasis added). The Court had elsewhere dismissed the Railroad's contention that a decision to designate a structure as a landmark is inevitably arbitrary or at least subjective because it is a matter of taste; it assumed the identification of arbitrary or discriminatory action by courts would be more difficult in the context of landmark regulation than in the context of classic zoning. *Id.* at 2663.

74. See note 66 and accompanying text *supra*; see note 73 and accompanying text *supra*.

encourage communities to think big—in terms of large comprehensive landmark designation programs—not only for their own sake, but also as a fortification against charges of arbitrariness.⁷⁵

2. *Harshness*

The Railroad sought to qualify its plight as frustration of distinct investment-backed expectations amounting to an unduly harsh impact on the use of its property. It based this claim on the city's rejection of two proposals to exploit the zoning district's remaining usable air space above the Terminal representing 89% of the allowable FAR on the Terminal lot,⁷⁶ and on the loss of profits under a \$3 million, 50 year lease for such air space.

The Railroad sought to enhance its taking claim in this regard by conceptually dividing its parcel into segments—the ground and underground (or Terminal) portion, and the super-adjacent air space. It then argued a deprivation of the gainful use of the “air rights” irrespective of the value of the remainder of the parcel.⁷⁷ The Court refused to countenance the self-serving division of a single parcel into discrete segments in determining whether governmental action effects a taking. Instead, it is the character of the action and the nature and extent of the interference with rights in the parcel as a whole—i.e., here, the city tax block fee estate—that determines the issue.⁷⁸

Thus, the Court was unwilling to find expectation of full use of air rights on the Terminal site equivalent to the investment-backed expectations of the mining company in *Pennsylvania Coal Co. v. Mahon*.⁷⁹ There it had invalidated a state regulation imposing expensive underground mining precautions (which rendered commercial mining unprofitable) in order to prevent subsidence of dwellings in residential areas over the mines. In *Pennsylvania Coal*, however, the coal company owned only the subsurface mining rights, having sold the property long before the relevant enactment, but having reserved the right to extract subsurface coal. In *Penn Central*, where the Railroad owned the fee including the superadjacent air space, the Court declined an imaginary division of the parcel. If the parcel as a whole retains a reasonable, beneficial use, there is not such a frustration of investment

75. See note 8 *supra*.

76. A percentage of zoning underutilization based upon the difference between the present 2 FAR occupied by the Terminal and the 18 FAR allowed in the area.

77. 98 S. Ct. at 2662-63.

78. *Id.* at 2663.

79. 260 U.S. 393 (1922). In so holding, the *Penn Central* Court stated:

[T]he submission that appellants may establish a 'taking' simply by showing that they have been denied the ability to exploit a property interest that they heretofore believed was available for development is quite simply untenable.

98 S. Ct. at 2663.

backed interests as to constitute a "taking".⁸⁰

If the Court had pursued the comparison further, the question of the value of the parcel "as a whole" might have led to an analogy between the value of the residential house in relation to the subadjacent mine and the value of the Terminal in relation to the superadjacent air space.⁸¹ The Court's discussion, reverberating with echoes of Justice Brandeis' dissent in *Pennsylvania Coal*,⁸² contains the potential for eventually overruling that case,⁸³ *sub silentio*, a possibility discussed in one important work not long ago.⁸⁴

Examining the landmark law's impact on the parcel as a whole, the Court found that, on the record below, the Railroad failed to prove an inability to obtain a reasonable return on its investment.⁸⁵ The Court noted that the Terminal's designation as a landmark not only permitted, but contemplated the use of the property precisely as it had been used for the past 65 years: as a railroad terminal containing office space and concessions.⁸⁶ It is significant in this regard that the Railroad entered into the \$3 million per year air rights lease four months *after* the city designated the Terminal as a landmark. In the Court's view, the owner's primary expectation regarding the Terminal was left undisturbed.⁸⁷

80. See *id.* 98 S. Ct. at 2663 n.27.

81. If the terminal is a reasonable beneficial use of land in a skyscraper city, then a single family house may be a reasonable beneficial use of land in the anthracite regions of Pennsylvania.

82. 260 U.S. 393, 419 (1922) (Brandeis, J., dissenting):

It is said that one fact for consideration in determining whether the limits of the police power have been exceeded is the extent of the resulting diminution in value; and that here the restriction destroys existing rights of property and contract. But values are relative. If we are to consider the value of the coal kept in place by the restriction, we should compare it with the value of all other parts of the land. That is, with the value not of the coal alone, but with the value of the whole property. The rights of an owner as against the public are not increased by dividing the interests in his property into surface and subsoil. The sum of the rights in the parts cannot be greater than the rights in the whole. The estate of an owner in land is grandiloquently described as extending *ab orco usque ad coelum*. But I suppose no one would contend that by selling his interest above one hundred feet from the surface he could prevent the State from limiting, by the police power, the height of structures in a city. And why should a sale of underground rights bar the State's power?

83. This assumes that the hurdle of the surface's alienation by the coal company prior to the imposition of the mining restriction can be surmounted either by Brandeis' nuisance control arguments in the *Pennsylvania Coal* dissent or by the legislative imperatives of the current environmental movement. See note 82 *supra*.

84. See note 43 *supra*.

85. 98 S. Ct. at 2666. See note 13 *supra*, regarding the "expectations" of a harmonious office tower over the Terminal. In response to a question by Mr. Justice Powell at the oral argument, the city conceded that "if appellants can demonstrate at some point in the future that circumstances have changed such that the Terminal ceases to be . . . 'economically viable,' appellants may obtain relief." *Id.* at 2666 n.36.

86. *Id.* at 2665-66.

87. *Id.*

Even indulging the Railroad by examining the law's impact on the pre-existing air rights, the Court rejected the inference that the City's denial of the two 50-stories-plus office building proposals "suggests an intention to prohibit *any* construction above the Terminal."⁸⁸ More importantly it found that, in any event, the special TDR privileges accorded the landmark owner rendered the severity of the landmark law's impact insufficient to require a finding that a "taking" had occurred:

[T]o the extent appellants have been denied the right to build above the Terminal, it is not literally accurate to say that they have been denied *all* use of even those pre-existing air rights. Their ability to use these rights has not been abrogated; they are made transferable to at least eight parcels in the vicinity of the Terminal, one or two of which have been found suitable for the construction of new office buildings. Although appellants and others have argued that New York City's transferable development rights program is far from ideal, the New York courts here supportably found that, at least in the case of the Terminal, the rights afforded are valuable. *While these rights may well not have constituted "just compensation" if a "taking" had occurred, the rights nevertheless undoubtedly mitigate whatever financial burdens the law has imposed on appellants and, for that reason, are to be taken into account in considering the impact of legislation.*⁸⁹

Certainly, the facts proven at the trial, and personally known to the author, supported the Court in these conclusions by demonstrating:

- 1) that the Railroad initiated, indeed drafted, earlier versions of a city amendment to existing TDR provisions in the Zoning Resolution which widened the radius of transferability and removed percentage of FAR limits on receiving lots in midtown zoning districts;

- 2) that the lessee of the Terminal's air rights had made an offer comparable to its original proposal to build over the Terminal, for air rights transferable to the nearby Biltmore or Roosevelt Hotel Properties also in the Railroad's ownership; and,

- 3) that the Railroad and lessee met frequently with the city to refine architectural drawings for an office building on the Biltmore site incorporating approximately half of the unused air rights over the Terminal.

In its first pronouncement on TDR as a technique to resolve the regulatory/taking impasse, the Court accepted New York City's classification of its TDR provisions within the regulatory portion of the public purpose spectrum.⁹⁰ It viewed the TDR privileges—far from a guilt-ridden gesture “not to leave the property owner empty-

88. 98 S. Ct. at 2666 (emphasis added). See also note 20 and accompanying text *supra*.

89. 98 S. Ct. at 2666 (second emphasis added; footnote omitted).

90. See notes 6 & 50 *supra*. While the Court failed to employ “Costonis semantics,” its decision evidently shares Costonis' view that TDR is a fair means of resolving the regulatory/taking impasse.

handed”⁹¹—as a valuable mitigating factor in considering the impact of landmark regulation. Interest in the Railroad’s development rights was not confined to prospective developers of Railroad properties but extended to other owners of eligible receiving lots in the vicinity of the Terminal.⁹² This interest could not be manifested until the Court in this decision recognized the legitimacy of the TDR device, thereby quieting persistent speculation that its use could give rise to inverse condemnation or “taking” claims under the rationale of the Rehnquist dissent.

Ten years ago, New York City was among the first local governments to experiment with TDR as a promising regulatory device to aid in the achievement of public objectives such as landmark preservation without sacrificing private property interests.⁹³ It would be an understatement to say that the device has generated a fair amount of comment in the ensuing decade.⁹⁴ In finding the city’s legislative judgment contained in its zoning and landmark laws consistent with the fifth and fourteenth amendment requirements, the Court signaled to communities across the nation that they may consider according TDR privileges to property owners singled out to bear special burdens for public purpose land use reasons as a valid means to cushion otherwise harsh regulatory impacts and restore an additional measure of real estate investment expectations.

91. 98 S. Ct. at 2673 (Rehnquist, J., dissenting).

92. The author is aware of at least one substantial offer made to the Railroad during the period immediately preceding oral argument in this case. The Railroad tabled the offer pending determination of the case. Subsequent to the decision, this offer was picked up by the Railroad and is in the process of consummation as this article goes to press. This TDR, however, seeks only 74,655 square feet of floor area—3% of the entire development rights bank available above the Terminal. Certainly, the zoning requirement for TDR approval of a “program for continuing maintenance of the landmark” should be interpreted as embracing considerations of proportionality. That is, the maintenance program required should be proportional to the magnitude and value of the transaction. New York City Zoning Resolution, § 74-792, subd. 5(b).

93. One experiment which failed mandated preservation, for passive recreational uses only, of certain private open space areas in the face of a proposal to build high rise residential towers thereon. Zoning provisions severed the development rights from these parcels and made these rights transferable to commercial areas in midtown Manhattan within an approximate one mile radius. The New York Court of Appeals invalidated this zoning experiment in *Fred F. French Investing Co. v. City of New York*, 39 N.Y.2d 587, 350 N.E.2d 381, 385 N.Y.S.2d 5 (1976), noting that the severed development rights had an uncertain and contingent market value while the residual use of the open space properties for passive recreation did not amount to a reasonable beneficial use. For a full history of this experiment, and a *contra* legal view of the matter, see Marcus, *Mandatory Development Rights Transfer and the Taking Clause: The Case of Manhattan’s Tudor City Parks*, 24 BUFFALO L. REV. 77 (1974).

94. It appears that more has been published about TDR than all other land use techniques combined. See Merriam & Merriam, *A Bibliography on the Transfer of Development Rights*, EXCHANGE BIBLIOGRAPHY 1338 (1977). (This publication of the Council of Planning Libraries contains 374 entries.)

3. Appropriation

The Railroad viewed the city's action prohibiting it from occupying the adjacent airspace above Grand Central Terminal, like the governmental action in *United States v. Causby*,⁹⁵ as tantamount to a public appropriation of a part of its property. Just as the use of Causby's chicken farm was destroyed by the frequent invasion by U.S. Army planes of the airspace above the farm, so also the Railroad alleged harsh reduction in the economic value of the Terminal site, due to the preservation of a public frame of airspace over the landmark.

The Court found the situations in the rural chicken farm and urban railroad terminal cases not to be remotely similar.⁹⁶ The Court characterized the government in *Causby* as having acted in an enterprise capacity to appropriate part of the property for a strictly governmental purpose—a military aircraft flight pattern.⁹⁷ In *Penn Central*, the Court found that the Landmarks Preservation Law simply restricted the Railroad or anyone else from occupying portions of the airspace above the Terminal, while permitting profitable use of the remainder of the parcel and in no way impairing the present use.⁹⁸ In sum:

This is no more an appropriation of property by the Government for its own uses than is a zoning law prohibiting, for "aesthetic" reasons, two or more adult theatres within a specified area, see *Young v. American Mini Theatres, Inc.*, *supra*, or a safety regulation prohibiting excavations below a certain level. See *Goldblatt v. City of Hempstead [sic]*, *supra*.⁹⁹

III

CONCLUSION: CAUSE FOR TRICENTENNIAL OPTIMISM

The Court's decision comes not only at a time of taxpayers' revolt but also at a time when recycled buildings have begun to rival new high

95. *United States v. Causby*, 328 U.S. 256 (1946).

96. 98 S. Ct. at 2665.

97. *Id.* The New York Court of Appeals had distinguished government action in an enterprise capacity (condemnation) from action in an arbitral capacity (regulation) in *Lutheran Church v. City of New York*, 35 N.Y.2d 121, 128, 316 N.E.2d 305, 310, 359 N.Y.S.2d 7, 14 (1974), where it had declared invalid the particular landmark designation at issue as an arbitrary but non-compensable regulation. In *Fred F. French Co. v. City of New York*, 39 N.Y.2d 587, 350 N.E.2d 381, 385 N.Y.S.2d 5 (1976), *appeal dismissed*, 429 U.S. 990 (1976), that Court similarly invalidated as arbitrary regulation a zoning restriction limiting private property to open space use. It cautioned that the 'taking' metaphor should not be confused with reality. *Id.* at 595, 350 N.E.2d at 385, 385 N.Y.S.2d at 9. Finally, in the present case the New York Court of Appeals indicated that there could be no taking since the Landmarks Preservation Law had not transferred control of the property to the city but only restricted the Railroad's exploitation of it (i.e. an exercise of arbitral, not enterprise, functions). *Penn Central Transp. Co. v. City of New York* 42 N.Y.2d at 334, 366 N.E.2d at 1277, 397 N.Y.S.2d at 920.

98. 98 S. Ct. at 2665.

99. *Id.*

risers in the conventional wisdom of the inner city marketplace.¹⁰⁰ Its implication will not be lost on municipalities anxious to preserve their aesthetic, historic, and cultural past at minimal cost to the taxpayer.

In the decade preceding the decision and following the Terminal's landmark designation, building recycling and preservation have become sound business decisions in addition to enhancements of the quality of life. Thus, the need for increased taxpayer resources to meet a heightened public preservation consciousness may be obviated by a responsive private market which undertakes to preserve property for reasons of self-interest. The *Penn Central* decision has jostled this private market, thereby promoting building recycling, by removing any lingering expectation that the public purse stands ready to pay just compensation (top dollar) for preserving landmark structures already housing reasonable beneficial uses.

While the burden of shouldering the preservation load under the regulatory approach may fall disproportionately on some (as is the case with many types of regulation), the alternative approach urged by Justice Rehnquist—a minor “burden per person”¹⁰¹ solution—would risk, in the Proposition 13 era,¹⁰² practical inability on the part of municipalities to designate and preserve their heritage.¹⁰³ One may therefore expect new comprehensive municipal landmark preservation activity as a result of the *Penn Central* decision, probably in concert with new recycling initiatives undertaken by a real estate industry shorn of its “taking” expectations. A comprehensive municipal program of landmarking will from now on be treated with all the judicial deference accorded classic zoning in the 50 year wake of *Euclid v. Ambler Realty Corp.*¹⁰⁴

The Court's recognition of the legitimacy and value of New York City's TDR privileges accorded landmark owners will likely trigger comparable efforts by governmental entities anxious to preserve various areas of critical concern to the human environment without unfairness to the owner. While the TDR solution to landmark preservation in an urban setting may not be easily adapted to beach or swamp preservation in rural areas,¹⁰⁵ the TDR option will nevertheless be explored

100. See generally RECYCLING INNER CITY REAL ESTATE: NEW TRENDS IN URBAN DEVELOPMENT (1976) (Practicing Law Institute Course Handbook).

101. 98 S. Ct. at 2672 (Rehnquist, J., dissenting). See note 71 *supra*.

102. “Proposition 13,” otherwise known as the “Jarvis-Gann amendment,” refers to a successful 1978 initiative drive which amended the California Constitution and severely limited state and local authority to levy and collect ad valorem taxes on real property. CAL. CONST. art. XIII A, § 2. Its passage signaled a nationwide “taxpayer's revolt.”

103. See note 8 *supra*.

104. 272 U.S. 365 (1926).

105. See J. COSTONIS & R. DEVOY, THE PUERTO RICO PLAN: ENVIRONMENTAL PROTECTION THROUGH DEVELOPMENT RIGHTS TRANSFER (1975).

more seriously in connection with natural or environmental area preservation after the *Penn Central* decision.

To guard against judicial intervention, legislative bodies will pay close attention to the factors present in the *Penn Central* case: 1) continuance of a reasonable, albeit sharply limited, beneficial residual use of the property, 2) existence of sufficient TDR-eligible receiving lots preferably, but not necessarily, in the same ownership as the lot from which the development rights spring, and 3) a TDR technique that minimizes non-reviewable municipal discretion (contingencies) and maximizes private options involving its exercise.¹⁰⁶

How wide should the radius of transferability of a landmark's development rights be? The legal success or failure of the TDR program may depend on the answer to this question. The number and ownership of eligible receiving lots for Grand Central Terminal's development rights was a significant factor in the Court's view of the New York City program as affording, at least in the case of the Terminal, "valuable" property rights.¹⁰⁷ But an overly wide radius of transferability risks loss of the planning rationale which links the underutilization of the landmark lot with the measure of overbuilding tolerated on lots nearby.¹⁰⁸ Pragmatism will continue to shape the precise answer to this question.

Finally, by looking favorably on the TDR privilege as a leavening agent in an otherwise possibly harsh exercise of local police power, the Court has begun to resolve the regulatory/taking impasse by expanding the police power. It has breathed new life into state and local regulations at a time when shrinking local fiscal resources make the municipal eminent domain alternative without the aid of the federal

106. In this connection a comparison of the *Fred French* decision invalidating a TDR measure in New York City, with the *Penn Central* decision will prove instructive if not fully satisfying. Costonis, in *The Disparity Issue: A Context for the Grand Central Terminal Decision*, 91 HARV. L. REV. 402, 420 (1977), continues to tout the municipally-funded development rights "bank" as a feasible TDR option for local governments (in part based on *dictum* in the New York Court of Appeals decision in *Fred French*). Under this approach the municipality condemns the development rights (extant under zoning), compensates the owner therefor, and subsequently sells them to developers interested in building larger structures than zoning allows. Prior to sale, however, the municipality is faced with an unenviable choice between its arbitral and enterprise functions. See note 85 *supra*. Does it bail out its investment at the sacrifice of politically sanctioned zoning standards? No need to tune in tomorrow. The consistent record of rejection of this option by municipalities for fiscal as well as planning reasons is not likely to be turned around by the *Penn Central* decision.

107. 98 S. Ct. at 2666.

108. See Marcus, *Air Rights*, *supra* note 5, at 378. In the lower court decision in *Fred French*, one of the factors which led the court to invalidate the city's TDR experiment was the spot zoning impact of overbuilding on a receiving lot of considerable distance from the preserved private park. Judge Waltemade implicitly questioned the benefit enjoyed by a neighboring property owner impacted by the allowable overbuilding on the receiving lot so far from the park. *Fred F. French Investing Co. v. City of New York*, 77 Misc. 2d 199, 352 N.Y.S.2d 762, (1973).

dollar an infrequent possibility. If strong and diverse local government initiatives remain essential in a nation tending towards homogeneity, *Penn Central* should renew national confidence in local government experimentation with creative solutions to vexing land use problems. Two years too late for the Bicentennial, the *Penn Central* decision may well insure the quality of our Tricentennial.

PUBLIC UTILITY LAND USE CONTROL ON THE URBAN FRINGE †

Municipal governments¹ are frequently concerned with the prospect of commercial, industrial, or residential development in the areas contiguous to municipal boundaries²—the urban fringe. Misguided growth in these areas may destroy desirable open space and outdistance the community's ability to provide services to the fringe area.³ Accordingly, the central city's main land use objective in the urban fringe area is to control the timing and location of development by prohibiting development in areas desirable for open space and by channeling development into areas adjacent to existing development at a rate consistent with the city's ability to expand municipal services.⁴

Local governments employ two basic methods to control the timing and location of development in the urban fringe: direct regulation of development, and indirect influence on development by adopting certain municipal policies.⁵ Direct regulation is accomplished through such devices as zoning ordinances and subdivision controls that are enacted pursuant to grants of police power delegated to local governments by state legislatures. Indirect regulation of development results from the influence of certain municipal policy decisions on the economic forces of development.⁶ Municipal decisions regarding the location and extent of public utility services, such as water and sewage lines, greatly influence development since the availability of public water and sewage services often determines the feasi-

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1. The term "municipal governments" is used interchangeably with "city governments" to refer to the governing body of a central city.

2. See ADVISORY COMMISSION ON INTERGOVERNMENTAL RELATIONS, URBAN AND RURAL AMERICA: POLICIES FOR FUTURE GROWTH 12-13 (1968); Becker, *Municipal Boundaries and Zoning: Controlling Regional Land Development*, 1966 WASH. U.L.Q. 1, 1-5.

3. ADVISORY COMMISSION ON INTERGOVERNMENTAL RELATIONS, URBAN AND RURAL AMERICA: POLICIES FOR FUTURE GROWTH 12 (1968).

4. See Fagin, *Regulating the Timing of Urban Development*, 20 LAW & CONTEMP. PROB. 298, 298-302 (1955).

5. See Clawson, *Editor's Introduction*, in RESOURCES FOR THE FUTURE, MODERNIZING URBAN LAND POLICY 5 (M. Clawson ed. 1973). This Note addresses land use controls of a very general nature: regulatory controls and policy controls. For a more comprehensive treatment of the variety of regulatory techniques available to local governments to control land use, see generally Freilich, *Development Timing, Moratoria, and Controlling Growth*, in PROCEEDINGS OF THE INSTITUTE ON PLANNING, ZONING AND EMINENT DOMAIN 147 (1974).

6. See TASK FORCE ON LAND USE AND URBAN GROWTH, THE USE OF LAND: A CITIZENS' POLICY GUIDE TO URBAN GROWTH 124-26 (1973).

bility of large scale development.⁷ This indirect method of land use control can be referred to as "public utility land use control."⁸

By employing public utility policy to control development in the urban fringe, municipalities may accomplish land use objectives that are not readily attainable through the use of direct regulation alone. Traditional zoning, for example, is generally an ineffective mechanism for controlling the timing and location of development since an effective land use control program requires more than just prohibitory regulation.⁹ In order to produce optimal results, development location and timing controls must encourage growth in certain areas according to a planned schedule as well as discourage growth in other areas. Zoning discourages development by limiting the permissible types of land use,¹⁰ but offers little positive encouragement to development. The selective extension of public utility services into areas planned for development at a rate commensurate with development timing objectives can provide the needed incentive for development.¹¹ Furthermore, an effective land use control program must coordinate all public activities that affect development, such as zoning and public utility extensions. If, for example, public utilities are extended into areas zoned for no development, political and economic pressures that may lead to the repeal of the zoning ordinances might be generated.¹² Accordingly, in order to most effectively control development timing and location, a city must supplement regulatory power over land use with the power to control the timing and location of public utility services.

While public utility land use control can effectively supplement and complement a city's power to directly regulate land use, it may also be used to circumvent statutory limitations on municipal regulatory powers. Cities have attempted to control development through the operation of their public utilities in geographic areas in which they have been granted no

7. *Id.* at 125-26; Note, *Control of the Timing and Location of Government Utility Extensions*, 26 STAN. L. REV. 945, 946-47 & nn.14-15 (1974) [hereinafter cited as *Control of Government Utility Extensions*].

8. "Public utility land use control" is to be distinguished from timing and development controls related to the adequacy of capital facilities. In the latter case, regulatory controls are linked to the ability of the municipality to furnish adequate services. See *Golden v. Planning Bd. of Ramapo*, 30 N.Y.2d 359, 366-69, 285 N.E.2d 291, 294-96, 334 N.Y.S.2d 138, 142-44, *appeal dismissed*, 409 U.S. 1003 (1972). Public utility land use control, as discussed in this Note, involves purposefully limiting utility services in order to control growth.

9. Bowden, *Article XXVIII—Opening the Door to Open Space Control*, 1 PAC. L.J. 461, 515-16 (1970); Heyman, *Legal Assaults on Municipal Land Use Regulations*, 5 URB. LAW. 1, 2 (1973); *Control of Government Utility Extensions*, *supra* note 7, at 946.

10. This statement is not intended to denigrate the efficacy of "incentive-zoning," whereby variances in zoning ordinances are used to make development more attractive to developers in certain areas. See Freilich, *Development Timing, Moratoria, and Controlling Growth*, in PROCEEDINGS OF THE INSTITUTE ON PLANNING, ZONING, AND EMINENT DOMAIN 147, 183-84 (1974). The availability of utility services is useful as a supplement to such a scheme because it makes development even more attractive to developers.

11. TASK FORCE ON LAND USE AND URBAN GROWTH, *THE USE OF LAND: A CITIZENS' POLICY GUIDE TO URBAN GROWTH* 125-26 (1973).

12. *Id.*

authority to directly regulate land use.¹³ The legitimacy of such attempts is questionable. At least one court has held that municipalities may not do indirectly through the operation of public utilities that which they can not legally do directly through land use regulation.¹⁴

This Note will identify the legitimate extent of municipal power to control land use and development on the urban fringe through control of public utilities. Initially, the common-law rules pertaining to the operation of public utilities will be examined to determine the parameters of municipal discretion in the operation of public utilities. That section will demonstrate that the potential for the abuse of a public utility's monopoly power has led courts to narrowly circumscribe the extent to which cities can implement public utility land use control. Having established the obstacles inherent in establishing land use policy through public utility management under the common law, this Note next explores the legal basis for public utility land use control that is contained in widely enacted state legislation. After considering the express terms and underlying policies of such statutes against the background of the common law, it will be concluded that although many municipal governments have the authority to implement public utility land use control to supplement regulatory power, neither the common law nor state statutes grant city governments the authority to use public utility land use control as an independent method of land use control to circumvent legislative limitations on the power to control land use and development in the urban fringe.

I. PUBLIC UTILITY LAND USE CONTROL UNDER THE COMMON LAW OF PUBLIC UTILITY REGULATION

To effectively use public utilities as an independent method of land use control on the urban fringe without direct statutory authority a city must fulfill three conditions. First, the city must have the authority to operate a public utility outside its municipal boundaries.¹⁵ In addition, the city must have a monopoly position with respect to utility service on the fringe.¹⁶ And finally, the city must have the authority to use its monopoly position to withhold utility service from areas in which development is deemed undesirable, and to extend utility service in desirable areas at a rate consistent with development timing objectives.¹⁷

13. See, e.g., *Robinson v. City of Boulder*, 547 P.2d 228, 231 (Colo. 1976); *Reid Dev. Corp. v. Township of Parsippany-Troy Hills*, 10 N.J. 229, 238, 89 A.2d 667, 671 (1952).

14. *Reid Dev. Corp. v. Township of Parsippany-Troy Hills*, 10 N.J. 229, 238, 89 A.2d 667, 671 (1952). See also *Robinson v. City of Boulder*, 547 P.2d 228, 231-32 (1976).

15. See *City of Tucson v. Sims*, 39 Ariz. 168, 173-74, 4 P.2d 673, 674-75 (1931); *City of Corbin v. Kentucky Utils. Co.*, 447 S.W.2d 356, 359-60 (Ky. 1969); *City of Henderson v. Young*, 119 Ky. 224, 226-27, 83 S.W. 583, 583 (1904).

16. If a city wishes to discourage development in an area, that city must not only refuse to make utility services available, but also must make sure that no competitor supplies the area. See, e.g., *Robinson v. City of Boulder*, 547 P.2d 228, 229-30 (Colo. 1976); *Levy Court v. City of Dover*, 333 A.2d 161, 162-63 (Del. 1975).

17. *Compare Control of Government Utility Extensions*, *supra* note 7, at 947, 962-63 (arguing

Common-law doctrines relating to the operation of public utilities often determine whether a municipality may obtain the above-enumerated conditions, and specify the legal consequences of their attainment. The courts traditionally examine the propriety of municipal action with respect to public utilities by determining whether the action taken is "municipal" or "proprietary."¹⁸ For example, under the common law, courts purport to decide whether or not a city has the power to act outside its municipal boundaries by determining whether the action is proprietary or municipal.¹⁹ In addition, a city's attempt to secure a monopoly position with respect to water services on the fringe, and the legal consequences of having done so also raise the issue whether government action is proprietary or municipal.²⁰ Furthermore, once a city secures a monopoly position over public utility services on the urban fringe, whether the public utility must serve all potential customers or can exercise discretion in servicing potential customers depends on whether the government is performing a proprietary or municipal function.²¹

Cases dealing with public utility law demonstrate that the distinction between a municipal and proprietary function is extremely opaque,²² leading one to suspect that the courts have substituted labels for analysis.²³ For example, the decision by a municipally owned public water utility regarding whether or not to extend its distributive system is labeled proprietary in some jurisdictions,²⁴ municipal in other jurisdictions,²⁵ and both municipal and proprietary in some jurisdictions.²⁶ Courts in these cases rarely discuss

that municipal utilities may so use their utilities) *with* Robinson v. City of Boulder, 547 P.2d 228, 229, 232 (Colo. 1976) and Reid Dev. Corp. v. Township of Parsippany-Troy Hills, 10 N.J. 229, 232, 238, 89 A.2d 667, 669, 671-72 (1952) (holding that municipalities may not so use their public utilities).

18. See generally 12 E. McQUILLIN, THE LAW OF MUNICIPAL CORPORATIONS §§ 35.34-35 (3d ed. 1970).

19. See, e.g., City of Tucson v. Sims, 39 Ariz. 168, 174, 4 P.2d 673, 675 (1931); City of Henderson v. Young, 119 Ky. 224, 227, 83 S.W. 583, 583 (1904).

Other terms evidently synonymous with "municipal" and "proprietary" appear in the case law. See 2 E. McQUILLIN, MUNICIPAL CORPORATIONS §§ 10.04-.05 (3d ed. 1966).

20. See, e.g., Robinson v. City of Boulder, 547 P.2d 228, 230-32 (Colo. 1976); Levy Court v. City of Dover, 325 A.2d 376, 380-81 (Del. Ch. 1974), *rev'd*, 333 A.2d 161 (Del. 1975); Reigle v. Smith, 287 Pa. 30, 34, 134 A. 380, 381 (1926).

21. Compare Bair v. Mayor of Westminster, 243 Md. 494, 497-99, 221 A.2d 643, 645-46 (1966) with Browne v. City of Bentonville, 94 Ark. 80, 82, 126 S.W. 93, 94 (1910).

22. For an interesting example of the confusion in the case law, see Levy Court v. City of Dover, 325 A.2d 376, 381 (Del. Ch. 1974), *rev'd*, 333 A.2d 161 (Del. 1975). See generally 12 E. McQUILLIN, THE LAW OF MUNICIPAL CORPORATIONS § 35.34 (1970).

23. Bruff, *Judicial Review in Local Government Law: A Reappraisal*, 60 MINN. L. REV. 669, 685-86 n.87 (1976).

24. E.g., Mayor of Cumberland v. Powles, 255 Md. 574, 579, 258 A.2d 410, 413 (1969); Robinson v. City of Boulder, 547 P.2d 228, 231 (Colo. 1976).

25. E.g., Crownhill Homes Inc. v. City of San Antonio, 433 S.W.2d 448, 455-58 (Tex. Ct. Civ. App. 1968); Valcour v. Village of Morrisville, 104 Vt. 119, 130-32, 158 A. 83, 86 (1932); accord, Moore v. City Council, 105 S.W. 926, 296 (Ky. 1907); City of Greenwood v. Provine, 143 Miss. 42, 53, 108 So. 284, 286 (1926); Drake v. Town of Boonton, 106 N.J. Super. 79, 84, 254 A.2d 151, 153 (1969).

26. Compare Reid Dev. Corp. v. Township of Parsippany-Troy Hills, 10 N.J. 229, 233, 89 A.2d 667, 669 (1952), with Reid Dev. Corp. v. Township of Parsippany-Troy Hills, 31 N.J. Super. 459, 462, 107 A.2d 20, 22 (1954).

the method of analysis used in distinguishing between municipal and proprietary functions;²⁷ instead, they discuss the impact of the result they have reached by choosing one of these labels.²⁸ Although the labels that courts attach to various municipal activities are inconsistently applied, the ultimate results that courts reach are fairly consistent when these labels are applied in the context of the three necessary conditions for independent public utility land use control. By examining these results and the justifications given for them, it is possible to identify the concerns that the courts are responding to in their application of the municipal and proprietary labels.

*A. The Municipal-Proprietary Distinction and the
Municipal Exercise of Extraterritorial Power*

As previously stated, the first prerequisite to employing public utility policies to influence land use on the urban fringe is that the municipality have the power to own and operate a public utility outside municipal boundaries.²⁹ In some states, municipal corporations have explicit statutory or constitutional authority to do so.³⁰ If no explicit authority exists, however, the city must rely on a general grant of authority to own and operate a public utility³¹ or a general grant of home rule power enabling the local government to initiate local legislation governing municipal affairs.³² Even though such general grants do not specifically authorize the extraterritorial operation of public utilities, the courts have fairly consistently upheld the sale of utility service beyond municipal boundaries on the theory that a purely economic exchange of utility service for revenue is proprietary, as distinguished from municipal.³³

In contrast to the relatively consistent affirmance of a city's power to sell services outside municipal boundaries, the courts uniformly refuse to

27. See, e.g., *City of Tuscon v. Sims*, 39 Ariz. 168, 174, 4 P.2d 673, 675 (1931); *Levy Court v. City of Dover*, 333 A.2d 161, 162-63 (Del. Ch. 1975), *rev'd*, 333 A.2d 161 (Del. 1975); *City of Henderson v. Young*, 119 Ky. 224, 227, 83 S.W. 583, 583 (1904).

28. See, e.g., *City of Tuscon v. Sims*, 39 Ariz. 168, 175-76, 4 P.2d 673, 675-76 (1931); *Levy Court v. City of Dover*, 333 A.2d 161, 164 (Del. Ch. 1975), *rev'd*, 333 A.2d 161 (Del. 1975); *City of Henderson v. Young*, 119 Ky. 224, 228, 83 S.W. 583, 584 (1904).

29. See note 15 *supra* and accompanying text. This prerequisite follows from the principle that local governments have no inherent power to act in the absence of state legislative or constitutional grants. See Bruff, *Judicial Review in Local Government Law: A Reappraisal*, 60 MINN. L. REV. 669, 677 (1976). See generally 1 C. ANTIEAU, *MUNICIPAL CORPORATION LAW* §§ 1.01, 2.00, 2.06 (1975); 1 J. DILLON, *COMMENTARIES ON THE LAW OF MUNICIPAL CORPORATIONS* §§ 98-99 (5th ed. 1911).

30. See F. SENGSTOCK, *EXTRATERRITORIAL POWERS IN THE METROPOLITAN AREA* 19-20 (1962) (listing statutes explicitly granting extraterritorial power to supply water and sewage services).

31. See *City of Tuscon v. Sims*, 39 Ariz. 168, 173-74, 4 P.2d 673, 674-75 (1931) (general constitutional grant); *Valcour v. Village of Morrisville*, 104 Vt. 119, 130-32, 158 A. 83, 86 (1932) (general statutory grant).

32. See *Royal Crest, Inc. v. City of San Antonio*, 520 S.W.2d 858, 864-66 (Tex. Ct. Civ. App. 1975).

33. See, e.g., *City of Tuscon v. Sims*, 39 Ariz. 168, 173-76, 4 P.2d 673, 674-75 (1931); *City of Henderson v. Young*, 119 Ky. 224, 227-28, 83 S.W. 583, 583 (1904); *accord*, *Municipal League of Bremerton v. City of Tacoma*, 166 Wash. 82, 87-90, 6 P.2d 587, 589-90 (1931).

validate extraterritorial land use regulations, such as zoning ordinances, in the absence of very explicit statutory authority.³⁴ Furthermore, even when an explicit grant of authority exists, the courts have tended to very narrowly construe such authority.³⁵ The apparent basis for the courts' reluctance to condone direct regulation of fringe areas by municipalities relates to democratic principles. A central city is not politically responsible to fringe residents. Accordingly, the danger arises that city government might abuse the power to regulate land use when fringe residents have no input in the planning and regulation process and no redress at the polls.³⁶ If, on the other hand, a state legislature explicitly authorizes the city government to exercise extraterritorial land use control, courts assume that fringe residents have recourse to protest unwanted regulations at the polls.³⁷ Thus, the distinction between municipal and proprietary governmental actions, in the context of extraterritorial actions by city governments, appears to be a distinction between those actions that constitute governance of persons to whom the governing body is not politically responsible, and those actions that are merely economic endeavors. In most states, therefore, central city governments should have ample power to own and operate a public utility extraterritorially, on the rationale that this is a "proprietary" power. In light of the reason for the distinction drawn by the courts between the type of power represented by extraterritorial land use control and extraterritorial public utility operations, however, it is unlikely that courts will respond favorably to land use control through the use of a "proprietary" power.

B. The Municipal-Proprietary Distinction and Municipal Monopolies of Public Utilities in the Urban Fringe

The second prerequisite to public utility land use control in areas contiguous to the municipality requires the city to monopolize the public

34. *E.g.*, *Roberson v. City of Montgomery*, 285 Ala. 421, 423, 233 So. 2d 69, 70 (1970); *Coronado Dev. Co. v. City of McPherson*, 189 Kan. 174, 177-78, 368 P.2d 51, 53-54 (1962); *City of Carlsbad v. Caviness*, 66 N.M. 230, 233-35, 346 P.2d 310, 312-13 (1959).

35. *See American Sign Corp. v. Fowler*, 276 S.W.2d 651, 654-55 (Ky. 1955); *Smeltzer v. Messer*, 311 Ky. 692, 695-96, 225 S.W.2d 96, 97-98 (1949); Tarlock, *Kentucky Planning and Land Use Control Enabling Legislation: An Analysis of the 1966 Revision of K.R.S. Chapter 100*, 56 Ky. L.J. 556, 569-70 (1968).

36. As stated by the Kentucky Court of Appeals:

We must bear in mind that we are dealing with a police power. As a general rule, the exercise of this power, delegated to a municipality, should be strictly construed, particularly when it encroaches on the rights of an individual. . . . Ordinarily, unless a statute expressly provides otherwise, the exercise of a police power by a municipality is limited to its territorial boundaries. A further settled principle is that if there is a reasonable doubt concerning the power of a city, the doubt should be resolved against its existence. . . . The above principles are significant in this case because the city's action, if sustained, seriously impairs the rights of a person owning property beyond its limits *who has no voice in its legislative policies*. . . .

Smeltzer v. Messer, 311 Ky. 692, 695-96, 225 S.W.2d 96, 97-98 (1949) (emphasis added).

37. *See Schlientz v. City of North Platte*, 172 Neb. 477, 489-90, 110 N.W.2d 58, 66-67 (1961); Tarlock, *Kentucky Planning and Land Use Control Enabling Legislation: An Analysis of the 1966 Revision of K.R.S. Chapter 100*, 56 Ky. L.J. 556, 568 (1957).

utility service on the urban fringe. Only if essential public services, such as water and sewage disposal, can be withheld from areas in which development is not desirable will the management of public utility service influence the timing and location of development. A city attempting to exercise public utility land use control must, therefore, keep competitors from supplying areas in which development is undesirable.³⁸ When confronted with such attempts to monopolize utility service, the courts have either declared the city action illegal or held the city to a very stringent duty to serve potential customers in the area.

A prime example of a case in which a court employed the municipal-proprietary distinction in the context of a city attempting to establish a utility monopoly in the urban fringe is contained in *Levy Court v. City of Dover*.³⁹ In *Levy Court*, the city had contracted with the county to maintain a "buffer zone" around the city in which the county would not provide water services.⁴⁰ When the county later tried to void the contract by arguing that it had no power to enter such a contract, the trial court held that the operation of a water system constituted a proprietary function that the county could contract away.⁴¹ While acknowledging that the case law regarding the distinction between municipal and proprietary functions was confusing, the chancellor concluded that proprietary was synonymous with economic, and that the operation of a public utility was simply the sale of a service.⁴² Notwithstanding the logic of the lower court's decision, the Delaware Supreme Court reversed, holding that the supply of water to county residents by the county was a municipal function that could not be contracted away.⁴³ The appellate court's opinion stressed the fact that to enforce the contract would leave the county residents at the mercy of the city government.⁴⁴

The *Levy Court* decisions highlight two major characteristics of the case law dealing with the common-law doctrines governing the operation of public utilities. First, labeling a government activity either municipal or proprietary in no way facilitates the analysis. The labels themselves signify little, but rather are used merely to denote the result reached by the court. Second, the courts are generally concerned with circumscribing the exercise of a potentially potent mechanism for regulating the use of property

38. See note 16 *supra* and accompanying text.

39. 325 A.2d 376 (Del. Ch. 1974), *rev'd*, 333 A.2d 161 (Del. 1975).

40. *Id.* at 378-79. The "buffer zone" represented the growth limits of the City of Dover. *Id.* at 379.

41. *Id.* at 381.

42. The analysis used by the court was somewhat hard to distill. The chancellor opined that "the test is not whether [the exercise of a statutory power] is permissive or mandatory but rather 'the nature of the activity itself must be controlling.'" *Id.* (quoting *Pruett v. City of Dayton*, 39 Del. Ch. 537, 540, 168 A.2d 543, 545 (1961)). Under this analysis the chancellor seemed to draw a distinction between enabling legislation that put municipalities in the same position as a private corporation, and those statutes that put the government in the position of a government. *Id.*

43. *Levy Court v. City of Dover*, 333 A.2d 161, 162 (Del. 1975).

44. *Id.* at 164.

owned by individuals who have little or no representation in the public utility decisionmaking process.⁴⁵

While the court in *Levy Court* prevented the city from obtaining a monopoly on water services in the fringe area by declaring the contract void, the Colorado Supreme Court was confronted by a municipality's attempt to secure a monopoly in a different fashion. In *Robinson v. City of Boulder*,⁴⁶ the city of Boulder successfully kept competing water suppliers out of a fringe area in which the city opposed development by opposing the issuance of a certificate of necessity and convenience to any water company attempting to serve that area.⁴⁷ The Colorado Supreme Court, stressing Boulder's involvement in excluding water companies, held that the operation of a public utility in the urban fringe was a "proprietary" function,⁴⁸ and as a result, held Boulder to a duty to serve all potential customers in the fringe area with water service in a nondiscriminatory manner.⁴⁹ In similar cases, the deliberate attempt to set up a monopoly position by opposing competition has been held to be tantamount to a declaration by

45. The chancellor in *Levy Court* made two fatal mistakes. First, he applied the municipal-proprietary distinction as it is used in cases involving the power to own and operate a public utility in the urban fringe to an entirely different situation—the use of monopoly power in the urban fringe. In the former case, as the chancellor correctly discerned, "proprietary" is synonymous with "economic". See note 62 *supra*. However, "economic," in that context, is distinguished from "governmental" as a category of central-city government actions that do not necessarily lead to control over fringe residents. See text accompanying notes 31-37 *supra*. In the latter case, when a heretofore proprietary action is in fact used to control fringe residents, the proprietary action becomes a municipal action, via judicial sleight of hand with the aid of very confusing case law. See 333 A.2d at 612; 325 A.2d at 381; notes 25-26 *supra* and accompanying text. The chancellor failed to recognize the municipal-proprietary distinction as result-oriented labels, and thereby made his second mistake as well: he reached the "wrong" result.

As used by the Delaware Supreme Court, the labels set the stage for a result more consonant with the court's conception of public policy. *Levy Court v. City of Dover*, 333 A.2d 161, 164 (Del. 1975). The City of Dover refused to supply water and sewage services to any residents of the "buffer zone" until the area in which those residents lived was annexed to the city. The city thereby attempted to compel those residents to vote for annexation. This made a sham of the required annexation election and was therefore contrary to the public policy of the state. *Id. Contra*, *Williams Bros. Pipe Line Co. v. City of Grand Forks*, 163 N.W.2d 517, 521 (N.D. 1968).

The Texas Supreme Court has stated in this regard:

The concept of proprietary capacity is hardly helpful. . . . The real reason for the rule that, in so far as treatment of consumers is concerned, the municipally-owned utility is no different from the privately-owned utility is that the economic nature of the business has not changed; it remains a monopoly in spite of the change in ownership.

The change from public to private ownership may, in theory at least, eliminate or lessen the profit motive, but the consumer of utility services still cannot pick and choose his supplier of water as he does his grocer. The utility consumer is thus at the mercy of the monopoly, and, for this reason, utilities, regardless of the character of their ownership, should be, and have been, subjected to control under the common-law rule forbidding unreasonable discrimination.

City of Texarkana, Tex. v. Wiggins, 151 Tex. 100, 105, 246 S.W.2d 622, 625 (1952).

46. 547 P.2d 228 (Colo. 1976).

47. *Id.* at 229-30.

48. *Id.* at 230-31. The court apparently used "proprietary capacity" and "public utility" interchangeably. *Id.*

49. *Id.* at 232.

the public utility of willingness to supply all customers in the area.⁵⁰ Indeed, some courts hold that all public utilities operating in the urban fringe are automatically required under the common law to serve all potential customers.⁵¹

These cases demonstrate that courts will apply the municipal-proprietary distinction to prevent municipal governments from satisfying the second condition for public utility land use control: securing a monopoly position with respect to essential public services in the urban fringe. When possible, the courts will strike down contractual attempts to monopolize public utility service as *ultra vires*.⁵² When the courts cannot prevent a municipality from securing a monopoly position, they will hold the municipally owned public utility to a very stringent duty to serve all customers.⁵³ Such a duty is, of course, inimical to a city's ability to discourage development by refusing to make utility service available. Even so, it is conceivable that a city with the power to operate a public utility in the urban fringe may not have to actively oppose competition therein. As the next section will demonstrate, however, the municipal-proprietary distinction will be applied to prevent municipal governments from exercising public utility land use control as an independent method of land development control on the urban fringe.

C. *The Municipal-Proprietary Distinction and the Duty to Serve*

Assuming that a municipal government successfully monopolizes water services on the urban fringe, a city, in order to exercise public utility land use control, must have the ability to use its monopoly power in a way that it can achieve land use and development objectives: it must have the ability to make utility service available only in areas in which development is desirable and only at a rate consistent with development timing objectives.⁵⁴ The municipal-proprietary distinction is important in this context

50. Actions by governments, the purpose of which is to deliberately stake out a monopoly position in an area, have been held to be tantamount to a declaration that the municipal utility has held itself out as ready, willing, and able to serve all customers in the "service area." *Robinson v. City of Boulder*, 547 P.2d 228, 229-30 (Colo. 1976); *Delmarva Enterprises, Inc. v. Mayor of Dover*, 282 A.2d 601, 603 (Del. 1971). See also *City of Milwaukee v. Public Serv. Comm'n*, 268 Wis. 116, 120, 122-23, 66 N.W.2d 716, 718, 720 (1954).

51. *Home Owner's Loan Corp. v. Mayor of Baltimore*, 175 Md. 676, 680, 3 A.2d 747, 749 (1939); cf. *City of Altoona v. Pennsylvania Pub. Util. Comm'n*, 168 Pa. Super. Ct. 246, 250, 77 A.2d 740, 742 (1951) (applying state statute subjecting municipal utilities operating outside city limits to regulation by the state public utility commission).

52. See notes 40-45 *supra* and accompanying text.

53. See text accompanying notes 46-51 *supra*.

54. *Control of Government Utility Extensions*, *supra* note 7, at 952-58, reads the cases applying the common law as imposing no significant limitation on municipal discretion to refuse extensions of municipally owned utilities, and concludes, "Local government has broad power to refuse to extend utility service to certain areas within its jurisdiction. [This power] is an important tool for controlling the location and timing of development. . . ." *Id.* at 962.

However, it is not clear whether municipal governments can control the timing and location of utility services in an effort to control land use in the urban fringe under the common law. First, it is not clear whether municipal governments are always afforded such broad discretion by common-law courts. Compare *id.* at 949-52 with text accompanying notes

as well.⁵⁵ If a municipally owned public utility operates in a proprietary capacity, courts hold it to a stringent duty to serve potential customers.⁵⁶ If the utility functions in a municipal capacity, courts afford it discretion in making services available.⁵⁷ The remainder of this section demonstrates that courts applying these common-law doctrines effectively prevent cities from exercising public utility land use control.

1. *The Duty to Serve*

As suggested in the preceding section, a municipally owned public utility operating in a proprietary capacity⁵⁸ is held to a duty to serve that is

58-68 *infra*. Secondly, even if municipal governments have such broad discretion, there is reason to doubt that it may be used to effectively control development. Compare *Control of Government Utility Extensions*, *supra* note 7, at 952-58, with text accompanying notes 69-84 *infra*. Thirdly, it is very doubtful that municipal governments have such broad discretion in decisions to extend public services to the urban fringe once they establish a monopoly position in that area.

With two exceptions, all the cases correctly cited in *Control of Government Utility Extensions*, *supra* note 7, for the proposition that municipal governments have broad discretion in making utility extensions involve suits by city residents to compel their respective city governments to extend utility services within territorial limits. Compare *id.* at 949-53 nn.24, 26, 31 & 43 with *Browne v. City of Bentonville*, 94 Ark. 80, 81, 126 S.W. 93, 94 (1910) (citizen plaintiff); *Richards v. City of Tustin*, 225 Cal. App. 2d 97, 98, 37 Cal. Rptr. 124, 125 (1964) (citizen plaintiff); *Moore v. City Council*, 105 S.W. 926, 926 (Ky. 1907) (citizen plaintiff); *Rounds v. Board of Water & Sewer Comm'rs*, 347 Mass. 40, 41, 196 N.E.2d 209, 211 (1964) (development within territorial limits of city's power to enforce subdivision regulations); *City of Greenwood v. Provine*, 143 Miss. 42, 50, 108 So. 284, 285 (1926) (citizen plaintiff); *Barney's Furniture Warehouse, Inc. v. City of Newark*, 62 N.J. 456, 457, 303 A.2d 76, 76 (1973) (local corporate plaintiffs); *Drake v. Town of Boonton*, 106 N.J. Super. 79, 81, 254 A.2d 151, 152 (1969) (citizen plaintiff); *Reid Dev. Corp. v. Township of Parsippany-Troy Hills*, 31 N.J. Super. 459, 461, 107 A.2d 20, 21 (1954) (citizen plaintiff); *Reid Dev. Corp. v. Township of Parsippany-Troy Hills*, 10 N.J. 229, 237-38, 89 A.2d 667, 669, 671-72 (1952) (holds municipal utility attempting to exercise public utility land-use control to a duty to extend); *Rose v. Plymouth Town*, 110 Utah 358, 359, 173 P.2d 285, 286 (1946) (citizen plaintiff); and *State ex. rel. Vanderwall v. Mayor of Phillips*, 134 Wis. 437, 437, 114 N.W. 802, 802 (1908) (citizen plaintiff).

The only cases cited by *Control of Government Utility Extensions*, *supra* note 7, that involved utility extensions outside of municipal limits are *Marr v. City of Glendale*, 40 Cal. App. 748, 181 P. 671 (1919), and *Lawrence v. Richards*, 111 Me. 95, 88 A. 92 (1913). However, in each of these cases, it is unlikely whether the extent of discretion in fact afforded by the courts to the municipal utility was any greater than that afforded a privately owned utility under the same circumstances. Compare *Marr v. City of Glendale*, 40 Cal. App. 748, 751, 181 P. 671, 672 (1919), and *Lawrence v. Richards*, 111 Me. 95, 99, 88 A.92, 94 (1913), with notes 64-65 *infra* and accompanying text. The language in these cases purporting to allow municipal utilities a broader discretion than is afforded privately owned utilities is, accordingly, dictum.

Furthermore, there is authority for the proposition that once a municipal utility has established a monopolist's market on the urban fringe, it is held to a duty to serve similar to the duty of a privately owned utility. *Home Owner's Loan Corp. v. Mayor of Baltimore*, 175 Md. 676, 680, 3 A.2d 747, 749 (1939); cf. *City of Altoona v. Pennsylvania Pub. Util. Comm'n*, 168 Pa. Super. 246, 250, 77 A.2d 740, 742 (1951) (applying state statute subjecting municipal utilities operating outside city limits to regulation by the state public utility commission).

55. See, e.g., *Bair v. Mayor of Westminster*, 243 Md. 494, 498, 221 A.2d 643, 645 (1965); *Reigle v. Smith*, 287 Pa. 30, 34, 134 A. 380, 381 (1926).

56. See text accompanying notes 58-68 *infra*.

57. See text accompanying notes 69-83 *infra*.

58. In this context, choice of the "proprietary" label precedes the conclusion that a municipally owned public utility will be held to the same duty of service that courts and public

inconsistent with public utility land use control. In order to assess the detrimental effect that the duty to serve has on attempts to control land use in the urban fringe, however, it is necessary to examine the precise scope of the duty. The courts traditionally allow municipally owned public utilities operating in a proprietary capacity to refuse service to potential customers if the refusal is based on a "utility-related reason." Public utilities may never, however, refuse service for reasons that are "collateral" to the reasonable needs of the utility.⁵⁹ Accordingly, whether a city can legitimately refuse to service potential customers in the urban fringe in order to discourage development depends on whether land use control can be classified as a utility-related reason.

The category of valid utility-related reasons traditionally recognized by the courts is very restricted.⁶⁰ A water utility may, for example, refuse to serve customers who have not paid their water bills,⁶¹ but discontinuance of service can not be used to coerce a customer into paying a bill when a bona fide dispute exists concerning the bill's validity,⁶² or to force a water customer to pay a city garbage collection fee.⁶³ The ability of a utility to refuse to extend water or sewage lines depends upon the economic or practical feasibility of making such an extension.⁶⁴ Insufficient expected return in light of capital outlay constitutes a judicially recognized utility-related reason for refusal to extend.⁶⁵ Likewise, the refusal to extend service because of present supply shortages may be a utility-related reason.⁶⁶

The rationale for the duty to serve, and the limited scope of exceptions to that duty that the courts impose on privately owned public utilities and

utility commissions apply to privately owned public utilities. This doctrine holds these utilities to a duty to make "gradual extensions of [their] distributive system[s] to meet the reasonable demands for [service] by the growing community." *Lukrawka v. Spring Valley Water Co.*, 169 Cal. 318, 325, 146 P. 640, 643 (1915). On the duty to serve, see generally Note, *The Duty of a Public Utility to Render Adequate Service: Its Scope and Enforcement*, 62 COLUM. L. REV. 312, 312-27 (1962) [hereinafter cited as *The Duty of a Public Utility*].

59. See *Robinson v. City of Boulder*, 547 P.2d 228, 229, 232 (Colo. 1976); *Owens v. City of Beresford*, 87 S.D. 8, 13-14, 201 N.W.2d 890, 892-93 (1972).

This "collateral reason" concept appears to be a basis for determining whether or not a utility's refusal to serve a particular individual constitutes "unreasonable discrimination," under the common-law doctrines forbidding such discrimination. See *Home Owners' Loan Corp. v. Mayor of Baltimore*, 175 Md. 676, 680, 3 A.2d 747, 749 (1938). See generally *The Duty of a Public Utility*, *supra* note 58, at 312-27.

60. See generally *The Duty of a Public Utility*, *supra* note 58, at 312-27.

61. *Dodd v. City of Atlanta*, 154 Ga. 33, 36, 113 S.E. 166, 167 (1922); *The Duty of a Public Utility*, *supra* note 58, at 326.

62. The reason for this rule, it has been stated, is that "[b]ecause the consumer's dependence on the utility provides it with an overwhelming bargaining advantage, discontinuance cannot be used to coerce a customer into paying a bill when there is a bona fide dispute concerning its validity." *The Duty of a Public Utility*, *supra* note 58, at 326.

63. *Owens v. City of Beresford*, 87 S.D. 8, 14, 201 N.W.2d 890, 893 (1972).

64. See *The Duty of a Public Utility*, *supra* note 58, at 316.

65. *Id.* at 317.

66. See *Mayor of Cumberland v. Powles*, 255 Md. 574, 579, 258 A.2d 410, 413 (1969). However, in the cited case, the court seems to prefer augmentation of the source of supply as a better alternative to meeting an expected supply shortage than allowing the city to pick and choose between prospective customers. *Id.* at 578-79, 258 A.2d at 412-13.

publicly owned utilities operating in their proprietary capacity, is a recognition that the monopoly power of public utilities has much potential for abuse. The common-law duty to serve is the mechanism by which courts restrain abuse of monopoly power. As one court stated:

[T]he consumer of utility services still cannot pick and choose his supplier of water as he does his grocer. The utility consumer is thus at the mercy of the monopoly and, for this reason, utilities, regardless of the character of their ownership, should be, and have been, subjected to control under the common-law rule forbidding unreasonable discrimination.⁶⁷

The narrow category of utility-related reasons delineates the situations in which courts deem it reasonable for a utility to withhold service. From the foregoing discussion, it is apparent that the courts have only been willing to allow municipally owned public utilities to refuse to provide service when the economic or practical necessities of operating a utility require it. Controlling land use in the urban fringe clearly falls outside this rationale. Indeed, the only two courts that have directly confronted the issue of whether land use policy constitutes a utility-related reason have unequivocally denied that land use objectives can justify a refusal to extend public utility service into the urban fringe.⁶⁸ Thus, municipal utilities that

67. *City of Texarkana, Tex. v. Wiggins*, 151 Tex. 100, 105, 246 S.W.2d 622, 625 (1952).

68. *Robinson v. City of Boulder*, 547 P.2d 228, 229 (Colo. 1976) (municipal utility may only refuse to extend for utility-related reasons; land use planning considerations do not suffice); *Reid Dev. Corp. v. Township of Parsippany-Troy Hills*, 10 N.J. 229, 235, 237-38, 89 A.2d 667, 671-72 (1952) (court compelled extension, stressing the fact that the city offered no economic justification for refusal to extend, and that the only reason for the refusal was that the plaintiff-developer refused to comply with lot-size conditions).

One commentator argues that *Reid* does not suggest a limitation on the extent of municipal discretion to refuse utility extensions that will preclude a municipality from exercising public utility land use control. *Control of Government Utility Extensions*, *supra* note 7, at 953-58. The author describes *Reid* as follows:

[P]etitioner requested a water extension of 600 feet so that he could develop his lots. The township was willing to make the extension only if the developer complied with the condition of enlarging his lots from 50-to 100-foot frontage. The developer refused to comply with this condition and sued to compel the township to make the extension. The Supreme Court of New Jersey ordered the township to make the extension.

Actual Holdings of Reid I. The court's decision was based in part upon a peculiarity of New Jersey law which prevents local government from exercising planning or zoning powers without first adopting the New Jersey Planning Act for the jurisdiction. Since Parsippany-Troy Hills had not adopted the Act at the time of petitioner's request for service, it could not legally regulate the petitioner's lot size as it had tried to do. Furthermore, and equally important, the court's decision was based also in part upon the admitted fact that the township gave no reason—other than the lot size proposed by the developer—to refuse the extension request. . . . As the court said, "[T]here was then no suggestion that the enlargement of the service was indefensible on economic grounds. . . ." In such a situation, and on such admitted facts, it would have been arbitrary and capricious for the township to refuse the extension once it was decided that the lot-size condition was an abuse of discretion.

Id. at 954-55 (footnotes omitted) (emphasis in original). Notwithstanding *Reid*, the author concludes that municipal governments have broad discretion to refuse utility extensions and that this discretion vests municipal government with an important land use control power. *Id.* at 962.

That reading of *Reid* incorrectly states the impact of that case on the ability to use public utility land use control on the urban fringe without statutory authority. The significance of the

are acting in a proprietary capacity will be unable to use public utility land use control as a development control technique in the absence of statutory authorization.

2. *The Scope of Municipal Discretion*

Although courts hold privately owned public utilities and municipal utilities operating in a proprietary capacity to a stringent duty to serve,⁶⁹ courts purport to allow municipal utilities operating in a "municipal" capacity to exercise a "governmental discretion" that is not reviewable except upon a showing of "fraud, corruption, or arbitrary action."⁷⁰ This apparently broad discretion could possibly justify public utility land use control on the urban fringe. The justifications and case authority for this discretion have been discussed extensively elsewhere.⁷¹ Therefore, it will suffice to summarize the justifications before proceeding to explore the parameters of this discretion in the case law.

Three principal arguments have been posited in favor of allowing cities to exercise virtually unreviewable discretion in determining whether to make municipal services available.⁷² First, the expansion of utility ser-

first holding—that Parsippany-Troy Hills had not adopted the New Jersey Planning Act—was not merely that the township's lot-size restrictions were illegal, but rather that the municipality was attempting to do indirectly through manipulation of utility extensions that which it could not do directly through land use regulations: control land use. *Reid Dev. Corp. v. Township of Parsippany-Troy Hills*, 10 N.J. at 238, 89 A.2d at 671. Accordingly, the second holding of *Reid* is more precisely that this type of land use control by indirection is an abuse of the discretion that the New Jersey courts usually afford municipal utilities in the operation of their public utilities. Compare *Reid Dev. Corp. v. Township of Parsippany-Troy Hills*, 10 N.J. at 237, 89 A.2d at 671, with *Reid Dev. Corp. v. Township of Parsippany-Troy Hills*, 31 N.J. Super. 459, 463, 107 A.2d 20, 22 (1954) (*Reid II*). The discretion afforded municipal utilities in the operation of their public utilities is not, at least in New Jersey, broad enough to permit municipal governments to exercise public utility land use control without specific statutory authority.

69. See notes 58-68 *supra* and accompanying text.

70. *Moore v. City Council*, 105 S.W. 926, 926 (Ky. 1907); *Control of Government Utility Extensions*, *supra* note 7, at 952.

This standard of arbitrariness, however, may be an overstatement of the amount of discretion afforded municipal utilities in decisions on extension of utility systems. Some courts, while proclaiming such broad discretion as the standard for reviewing extension decisions, in fact discuss factors relating to the economic and practical feasibility of the extension. See, e.g., *Marr v. City of Glendale*, 40 Cal. App. 748, 750-51, 181 P. 671, 672 (1919); *City of Greenwood v. Provine*, 143 Miss. 42, 53, 108 So. 284, 286 (1926); *Drake v. Town of Boonton*, 106 N.J. Super. 79, 84, 254 A.2d 151, 153 (1969); *Reid Dev. Corp. v. Township of Parsippany-Troy Hills*, 31 N.J. Super. 459, 464, 107 A.2d 20, 23 (1954). Other courts have held that municipal utilities operating outside municipal limits are held to the same duty to serve as is a privately owned utility. *Bair v. Mayor of Westminster*, 243 Md. 494, 498, 221 A.2d 643, 645 (1966); *City of Altoona v. Pennsylvania Pub. Util. Comm'n*, 168 Pa. Super. Ct. 246, 249, 77 A.2d 740, 742 (1951) (statutory requirement).

71. *Control of Government Utility Extensions*, *supra* note 7, at 950-52. But see notes 54, 70 *supra* (caveats on the authority relied upon in the above article).

72. *Control of Government Utility Extensions*, *supra* note 7, at 950-52, 955-57. This commentator advances one further argument that is not discussed above:

[T]o order a township to extend its water and sewage facilities to all of the developments within its jurisdiction would be to force "the municipality to take a stake in the speculation of [the developer's] success in the prospective development in the area."

Id. at 951, quoting *Reid Dev. Corp. v. Township of Parsippany-Troy Hills*, 31 N.J. Super. 459,

vices requires "allocative decisions" in which the decisionmaker must weigh the cost of utility extension against the cost of other public services that compete for municipal revenues. The task of allocating public resources among local government operations, such as schools, police services, and public utilities, appropriately rests with public officials and, thus, the decision whether to extend publicly owned utilities is outside the province of the courts.⁷³ The second justification centers on practical considerations that make it difficult for a court to supervise and enforce a utility extension order. The technical and financial problems involved in coordinating the construction of a public utility extension require a greater degree of expertise and familiarity with the needs of the community than that possessed by the courts. Furthermore, a court has no adequate means of enforcing a decision to compel an extension if the voters of the local community vote down the bond issues necessary to provide funds for the construction. Accordingly, courts are simply ill-equipped to structure or enforce orders compelling an extension and should not attempt to do so.⁷⁴

The third and final justification stresses that the managers of the municipally owned utilities are public servants ultimately responsible to their consumers at the polls. Since municipal governments are politically responsible to their customers, there is no compelling reason for court intervention to restrict the discretion of publicly owned utilities.⁷⁵

Although the justifications articulated above seemingly favor broad municipal discretion,⁷⁶ a closer examination reveals that when these justifications are applied by the courts, they do not support the use of sufficient discretion to allow public utility land use control.⁷⁷ Indeed, they support a justification for refusal of service that is not much broader than the "utility-related reasons" that justify service refusal by a utility operating in its proprietary capacity. Under the common law, the privately owned or proprietary municipal utility is allowed to refuse service if the economic or practical realities of operating a public utility require such action.⁷⁸ The "allocative decisions" justification for broad municipal discretion merely adds municipal budget restrictions to the list of reasons for which it would be reasonable to refuse service. The case law reveals that courts afford municipal utilities such broad discretion only in situations involving the

464, 107 A.2d 20, 23 (1954). This argument seems to refer to the situation in which future returns to the city on its capital investment in main lines may be insufficient to cover the cost of an extension. Since, however, the economic feasibility of making an extension is a "utility-related reason" for a refusal of service which would justify a privately owned utility's refusal to extend service, the above economic feasibility argument adds little to a determination of whether a municipally owned utility should be afforded a greater degree of discretion than the common law affords a privately owned utility. See text accompanying note 65 *supra*.

73. *Control of Government Utility Extensions*, *supra* note 7, at 950.

74. *Id.* at 951-52, 957.

75. *Id.* at 956-57.

76. *Id.* at 958.

77. *Contra, id.* at 963.

78. See text accompanying notes 58-68 *supra*.

extension of the municipality's distributive system.⁷⁹ In these situations, it is reasonable to assume that the city's reluctance to extend service is based on the adverse impact such an extension would have on city revenue allocations. When the facts demonstrate that this assumption is not reasonable, however, courts will label the municipality's action proprietary and compel extension.⁸⁰ Accordingly, if potential customers offer to pay for the extension of service lines into the urban fringe, the "allocative decisions" justification evaporates.⁸¹

The other two justifications for broad municipal discretion provide little support for its existence with regard to public utility land use control on the urban fringe. The argument that public utility managers are politically responsible to customers, when considered in the context of urban fringe residents, is inapposite.⁸² And, although the courts recognize the practical and technical difficulties of enforcing an extension order, these factors have not swayed them in their determination to protect fringe residents from governmental control by a politically unresponsive municipal government.⁸³ Furthermore, notwithstanding the arguments justifying the allowance of municipal discretion in extending utility services, when the facts of any particular case demonstrate that the city's refusal to extend services is primarily based on land use planning considerations, the courts have compelled the extension. In such a case, the extension of service main lines disrupts the allocation of municipal revenues, and entails the issuance of a court order fraught with practical and technological difficulties. Nonetheless, when those considerations are balanced against the perceived

79. See, e.g., *Town of Wickenburg v. Sabin*, 68 Ariz. 75, 79, 200 P.2d 342, 345 (1948) (dictum), and authority cited note 54 *supra*. Cases involving termination of existing service or tap-ins (as opposed to extensions) do not generally afford the municipality a "municipal discretion." See, e.g., *Owens v. City of Beresford*, 87 S.D. 8, 13, 201 N.W.2d 890, 892 (1972) (termination of supply); *Delmarva Enterprises, Inc. v. Mayor of Dover*, 282 A.2d 601, 602 (Del. 1971) (tap-in).

80. This assumption may prove wrong in two situations important to public utility land use control: First, where a public utility in fact uses this discretion to exercise planning and zoning powers, see note 68 *supra*; second, where a developer is willing to pay for an extension and tap-in to the main line, see note 81 *infra*. In the latter case, the "allocative decisions," justification for discretion is no longer apposite, and no such broad discretion is allowed by the courts. Both of these exceptions to the broad discretion afforded municipal utilities in making service extensions limits the usefulness of this discretion as a land use control device.

81. See *Delmarva Enterprises, Inc. v. Mayor of Dover*, 282 A.2d 601, 602 (Del. 1971).

The effect of cases of this nature on the ability of a municipally owned public utility to use its municipal discretion to refuse to extend its lines in order to control development is clearly devastating. That discretion is not a very powerful land use control tool, if to circumvent planning objectives and this land use control scheme all a developer need do is offer to pay for the extension.

82. Indeed, the lack of political representation in the fringe area may explain why some courts hold municipal utilities operating in a monopoly capacity on the urban fringe to the same duty to serve as that to which privately owned utilities are held. Compare *Home Owners' Loan Corp. v. Mayor of Baltimore*, 175 Md. 676, 680, 3 A.2d 747, 749 (1938) (municipally owned public utilities, especially when operating extraterritorially, are acting in their proprietary capacity) with *City of Texarkana, Tex. v. Wiggins*, 151 Tex. 100, 105, 246 S.W.2d 622, 625 (1952) (the proprietary concept is unhelpful; the real reason for holding municipally owned utilities to a duty to serve without discrimination is to restrain monopoly power).

83. See cases cited note 84 *infra*.

need to protect fringe residents from governmental control by the central city, the courts apparently consider the integrity of the city budget and the difficulties of enforcing the extension order to be less compelling.⁸⁴

D. A Summary

As demonstrated in the preceding sections, the common-law doctrines relating to the operation of public utilities preclude the effective use of public utility land use control on the urban fringe.⁸⁵ If these doctrines do not entirely eliminate a municipality's ability to practice public utility land use control, they frustrate municipal attempts to use such control often enough to make it an unreliable development control device.

Some courts refuse to uphold extraterritorial water supply by a municipal utility absent a specific statute enabling such supply.⁸⁶ Others, while upholding extraterritorial supply, do so only on the assumption that municipal control over the supply of water on the urban fringe will not be used as a device by which to exercise governmental control over citizens to whom that government is not politically responsible.⁸⁷ To assure the validity of this assumption, some courts hold that any municipal utility operating outside municipal boundaries must serve all potential customers without discrimination.⁸⁸ Under the common law as applied by these courts, a city cannot manipulate the location and extent of public utilities to achieve land use objectives.

In states that allow extraterritorial water supply and afford municipal utilities municipal discretion in extension of its distributive system, public utility land use control will not work consistently enough to be a useful growth control device. A municipal utility's decision lies within its discretionary power only if such a decision relates to the extension of its distributive system that necessitates an allocation of municipal revenues.⁸⁹ A person desiring to develop land on the urban fringe can easily frustrate municipal attempts to use this discretion to control land use by offering to pay for the extension and tap-in.⁹⁰ Furthermore, if it is determined that a city is

84. See, e.g., *Robinson v. City of Boulder*, 547 P.2d 228, 232 (Colo. 1976) (ordered extension without considering the extent of the extension involved). Compare *Reid Dev. Corp. v. Township of Parsippany-Troy Hills*, 10 N.J. 229, 232, 238, 89 A.2d 667, 668-69, 671 (1952) (*Reid I*) (600-foot extension compelled) with *Reid Dev. Corp. v. Township of Parsippany-Troy Hills*, 31 N.J. Super. 459, 464, 107 A.2d 20, 22-23 (1954) (discussing ultimate economic effect of the compelled extension in *Reid I*).

85. See text accompanying notes 38-84 *supra*.

86. *City of Corbin v. Kentucky Utils. Co.*, 447 S.W.2d 356, 359-60 (Ky. 1969); *Richards v. City of Portland*, 121 Or. 340, 345, 255 P. 326, 328 (1927). For a listing of state statutes explicitly authorizing the extraterritorial supply of utility services, see F. SENGSTOCK, *EXTRATERRITORIAL POWERS IN THE METROPOLITAN AREA* 19-21 & nn.78-82 (1962).

87. See text accompanying notes 29-37 *supra*.

88. See, e.g., *Bair v. Mayor of Westminster*, 243 Md. 494, 498, 221 A.2d 643, 645 (1965); *Reigle v. Smith*, 287 Pa. 30, 34, 134 A. 380, 381 (1926).

89. See text accompanying notes 76-79 *supra*.

90. See *Town of Wickenburg v. Sabin*, 68 Ariz. 75, 78-80, 200 P.2d 342, 344-45 (1948); *Delmarva Enterprises, Inc. v. Mayor of Dover*, 282 A.2d 601, 602 (Del. 1971).

refusing to extend service in order to accomplish land use objectives, some courts have compelled an extension even though such extension involves the allocation of municipal revenues.⁹¹ In any of these cases, it is conceivable that a city might have a valid land use objective to which the courts would favorably respond if the city were authorized to control land use through direct regulation in the fringe area and attempted to justify the management of public utilities as a means of pursuing that objective. Under the common law, however, these land use objectives may not be advanced.⁹² Instead, the extent to which a city can exercise public utility land use control depends upon considerations of "utility-related reasons": factors totally alien to land use control.⁹³ The sophistry involved in attempting to justify public utility land use control under the common law, therefore, will either never work or will not work consistently enough for effective control of development in the urban fringe.

The lesson of the common law is that a city may not do indirectly through control of its public utilities that which it cannot do directly through regulatory powers⁹⁴—control land use on the urban fringe.⁹⁵ The cases in which the courts refused to authorize extraterritorial land use regulation in the absence of specific state enabling legislation demonstrate that the courts are very concerned with the exercise of governmental control over fringe residents by a politically unresponsive central city government.⁹⁶ Only to the extent that a state legislature, which is politically responsible to both fringe and central city residents, authorizes any type of land use control, will a court countenance it.

II. STATUTORY AUTHORITY FOR PUBLIC UTILITY LAND USE CONTROL

Although the common law precludes city governments from effectively using public utility land use control, widely enacted state statutes grant municipalities the power to control the location and timing of public utility extensions in order to implement land use and development objectives.⁹⁷

91. See cases cited note 84 *supra*.

92. Land use objectives are not "utility related reasons." *Robinson v. City of Boulder*, 547 P.2d 228, 231-32 (Colo. 1976). Furthermore, the use of "municipal discretion" in making utility extensions for effectuation of land use objectives is an abuse of that discretion. See note 68 *supra*. Thus, whether or not a municipal utility is acting in a "proprietary" or a "municipal" capacity, it may not actively use public utilities as a land use control mechanism.

93. See text accompanying notes 58-66, 77-81 *supra*.

94. See *Reid Dev. Corp. v. Township of Parsippany-Troy Hills*, 10 N.J. 229, 238, 89 A.2d 667, 671 (1952).

95. See *Robinson v. City of Boulder*, 547 P.2d 228, 231 (Colo. 1976).

96. See notes 34-37 *supra* and accompanying text.

97. ALA. CODE tit. 11, § 11-52-11 (1975); ARIZ. REV. STAT. § 9-461.07(B)-(C) (Supp. 1975); ARK. STAT. ANN. § 19-2827(f) (1968); CAL. GOV'T CODE § 65401 (West 1966); COLO. REV. STAT. § 31-23-109 (1973); CONN. GEN. STAT. ANN. § 8-24 (West 1971); DEL. CODE tit. 22, § 708 (1974); FLA. STAT. ANN. § 163.3194 (West Supp. 1977); IDAHO CODE § 67-6508(f)(1) (Supp. 1977); ILLINOIS MUNICIPAL CODE § 11-12-5(1), (3), ILL. REV. STAT. ch. 24, § 11-12-5(1), (3) (1975); IND. CODE ANN. § 18-7-2-36 (1974) (metropolitan planning departments); *id.* § 18-7-5-46 (1974) (local planning commissions); KAN. STAT. § 12-704a (1975); KY. REV. STAT. §§ 100.183, .187 (1970); LA. REV. STAT. ANN. § 33:109 (West 1951); MD. ANN. CODE art. 66B, § 3.08 (1970); MICH. COMP. LAWS § 125.39 (1970); MINN. STAT. § 462.356 (1976); MO. REV.

One such statute provides that "no . . . public utility, whether publicly or privately owned, shall be constructed or authorized . . . until the location, character and extent thereof shall have been submitted to and approved by the [municipal planning] commission."⁹⁸ Statutes like this remove some of the major legal obstacles to public utility land use control erected by the common law. If attempting common-law public utility land use control, a city must own and operate its own utility and be concerned with the duty to serve potential customers if it establishes a monopoly over water services and attempts to use monopoly power to control land use.⁹⁹ Under statutes authorizing public utility land use control, however, a city planning commission has the power to control the location and extent of public utilities.¹⁰⁰

The extent to which a municipality can use its power to control public utilities under state statutes is unclear in two respects that are important to the effective use of public utility land use control on the urban fringe. First, it is not always clear whether the power to control public utilities may be exercised outside of municipal limits. For example, the Standard City Planning Enabling Act (SCPEA),¹⁰¹ a model for many state statutes,¹⁰² empowers municipalities to make a "municipal plan"¹⁰³ for the "physical development of the municipality, including any areas outside of its boundaries which . . . bear relation to the planning of such municipality."¹⁰⁴ The Act then provides:

Whenever the commission shall have adopted the *master plan of the municipality or of one or more major sections thereof* . . . no . . . public utility . . .

STAT. § 89.380 (1969); MONT. REV. CODES ANN. § 11-3840 (1968); NEB. REV. STAT. § 15-1104 (1977); N.H. REV. STAT. ANN. § 36:13 (1970); N.J. STAT. ANN. §§ 40:55D-29, :55D-31 (West Supp. 1976); N.M. STAT. ANN. § 14-18-11 (1953); N.Y. GEN. CITY LAW § 30 (McKinney 1968) (city planning); N.Y. GEN. MUN. LAW § 239-d(2) (McKinney 1974) (regional planning); N.C. GEN. STAT. § 160A-361(4) (1975); N.D. CENT. CODE § 40-48-12 (1960); OHIO REV. CODE ANN. § 713.02 (Page 1976); OKLA. STAT. tit. 11, § 1417 (1971) (affecting only cities over 160,000 population, *id.* § 1411); OR. REV. STAT. § 227.090 (1977); PA. STAT. ANN. tit. 53, § 22767 (1957); R.I. GEN. LAWS § 45-22-6 (Supp. 1976); S.C. CODE § 5-23-550 (1976); S.D. COMPILED LAWS ANN. § 11-6-19 (Supp. 1976); TENN. CODE ANN. § 13-507 (1973); UTAH CODE ANN. § 10-9-21 (1973); VA. CODE § 15.1-465 (Cum. Supp. 1977); WASH. REV. CODE § 35A.63.080 (1976); W. VA. CODE §§ 8-24-16 to 27 (1976); WIS. STAT. ANN. § 62.23(5) (West 1957); WYO. STAT. § 15.1-76 (1965).

98. LA. REV. STAT. ANN. § 33:109 (West 1951).

99. See text accompanying notes 38-53 *supra*.

100. See ALA. CODE tit. 11, § 11-52-11 (1975); COLO. REV. STAT. ANN. § 31-23-109 (1973); CONN. GEN. STAT. ANN. § 8-24 (West 1971); LA. REV. STAT. ANN. § 33:106 (West 1951); MD. ANN. CODE art. 66B, § 3.08 (1970); MICH. COMP. LAWS § 125.39 (1970); MO. REV. STAT. § 89.340 (1969); N.M. STAT. ANN. § 14-18-11 (1973); OHIO REV. CODE ANN. § 713.02 (Page 1976); OKLA. STAT. tit. 11, § 1420 (1971); PA. STAT. ANN. tit. 53, § 22767 (1959); S.C. CODE § 5-23-550 (1976); S.D. COMPILED LAWS ANN. § 11-6-19 (Supp. 1976); TENN. CODE ANN. § 13-507 (1973); UTAH CODE ANN. § 10-9-21 (1953); VA. CODE § 15.1-456 (Supp. 1976); WIS. STAT. ANN. § 62.23(5) (West 1957); WYO. STAT. § 15.1-76 (1957); *cf.* statutes cited note 97 *supra* (for statutes that are textually different from those cited above, but nonetheless support public utility land use control).

101. ADVISORY COMM'N ON CITY PLANNING & ZONING, U.S. DEP'T OF COMMERCE, A STANDARD CITY PLANNING ENABLING ACT (1928) [hereinafter cited as SCPEA].

102. See statutes cited note 100 *supra*.

103. SCPEA, *supra* note 101, § 2.

104. *Id.* § 6.

shall be constructed . . . *in the municipality or in such planned section . . .*
[unless approved by the planning commission].¹⁰⁵

If "master plan of the municipality" is synonymous with "municipal plan," it describes areas outside municipal limits and the SCPEA gives planning commissions the power to approve utility extensions on the urban fringe—a "major section" of the municipal plan.¹⁰⁶ If, however, "master plan of the municipality" means a plan for development within city limits, public utility extensions on the urban fringe do not need to be approved by the planning commission.¹⁰⁷

In addition to the ambiguous language regarding extraterritorial jurisdiction, statutes like the SCPEA do not articulate permissible purposes for which municipal governments may control public utilities. The SCPEA seemingly gives the planning commission the power to disapprove a utility extension for any reason as long as that reason is communicated to the municipality's governing body, and the government's action thereon is a matter of public record.¹⁰⁸ Since the drafters required that all decisions regarding disapproval of a utility extension be made a matter of public record in order to ensure accountability, it is arguable that the drafters did not intend to limit the reasons for which a city government could legitimately disapprove a utility extension.¹⁰⁹ Accountability to city residents, however, will not appease the courts when statutes like the SCPEA confer

105. *Id.* § 9 (emphasis added).

106. Two courts evidently have accepted this interpretation of their states' SCPEA-type statutes. *Roberson v. City of Montgomery*, 285 Ala. 421, 424-25, 233 So. 2d 69, 71-72 (1970) (dictum); *Robinson v. City of Boulder*, 547 P.2d 228, 230-31 (Colo. 1976). The *Robinson* decision supports this reading of the statute. It held that the territorial limitations of Boulder's power to control public utility extensions was circumscribed by the territorial limitations of Boulder's power to plan; that is, the power extended to any areas outside of municipal boundaries that bear relation to the planning of the municipality, and in which the county planning commission agrees to allow city planning. 547 P.2d at 230-31. The SCPEA provision regarding territorial limitations on the power to plan does not contain the proviso requiring agreement by a county planning commission before a central city can plan in the unincorporated urban fringe. See SCPEA, *supra* note 101, § 6. Thus, the *Robinson* decision supports the proposition that under the SCPEA a city planning commission has the power to plan and approve public utility extensions in any areas outside of municipal boundaries that, in the planning commission's judgment, bear relation to the municipality.

107. This is the interpretation favored by the explanatory footnotes to the SCPEA. SCPEA, *supra* note 101, at 20 n.48. *But cf.* text accompanying notes 150-157 *infra* (this Note's interpretation).

108. SCPEA, *supra* note 101, § 9.

109. This premise is suggested by the requirement that the planning commission must submit reasons for any disapproval of proposed utility extension, and further that the city governors could overrule such a disapproval by a recorded vote. *Id.* Since the planning commission must submit reasons for disapproval, this suggests that the city council may limit the use of the power by the commission. The fact that the governing body's power to limit the planning commission must be exercised as a matter of public record suggests that the constituents of those governors are given the power to limit the city council. *Id.* In the words of the drafters,

[I]f there is to be any effective city planning in the community, future public improvements must not be authorized or carried out until they have been submitted to the city planning commission and their relation to the city plan carefully studied and the public given a chance to discuss and weigh the proposal.

Id. at 20 n.47. See also *id.* § 20, at 12 n.20.

extraterritorial power over utility extensions. Courts are generally highly sensitive to the use of extraterritorial government power¹¹⁰ and will probably attempt to limit the scope of government power over utility extensions by using statutory or constitutional construction techniques.¹¹¹ Until statutes like the SCPEA have been authoritatively construed, neither the extent of municipal power to control public utilities nor the areas in which it can be exercised will be clear.

This section attempts to determine the extent to which municipal governments can legitimately control public utilities in order to further land use objectives under authority of state statutes similar to the SCPEA. The analysis proceeds on the premise that the intent of the legislature, to the extent it can be gleaned from the text and structure of the entire act and from legislative history, should be given full effect.¹¹² The SCPEA was chosen as the statutory model because of its textual similarity to many state statutes¹¹³ and because the explanatory footnotes to the SCPEA indicate the legislative intent in states adopting it. It should be noted, however, that textual differences between particular state statutes and the SCPEA may render portions of this analysis inapposite, or suggest a different legislative intent. Nonetheless, from the text, structure, and explanatory footnotes to

110. See text accompanying notes 35-37 *supra*.

111. Some courts have already strictly construed the portion of these statutes which purports to confer extraterritorial jurisdiction to control land use. See, e.g., *Robinson v. City of Boulder*, 547 P.2d 228, 230-31 (Colo. 1976); *American Sign Corp. v. Fowler*, 276 S.W.2d 651, 655 (Ky. 1955). The reason for such strict construction was voiced in *Smeltzer v. Messer*, 311 Ky. 692, 696, 225 S.W.2d 96, 97-98 (1949) (land use control on the urban fringe "seriously impairs the rights of a person owning property beyond its limits who has no voice in its legislative policies. . . .").

No court has directly confronted the issue of the extent of municipal power to control public utilities under this statute. See generally 3 R. ANDERSON, *AMERICAN LAW OF ZONING* § 21.10 (2d ed. 1977) (discussing the legal effect of this type of statute with no case support). However, the statute is susceptible to limitation by judicial canons of construction. See *City of Heath v. Licking County Regional Airport Auth.*, 16 Ohio Misc. 69, 78-79, 237 N.E.2d 173, 179-80 (Licking County Ct. C.P. 1967) (*expressio unius est exclusio alterius*).

Furthermore, it is possible to conceive of several constitutional theories for limiting the application of a statute that purports to give local governments the power to disapprove public utility extensions for any reason whatsoever. For example, all government action must bear a rational relation to a legitimate state purpose in order to fit within the limitations on land use control imposed by the due process clause of the fourteenth amendment. *American Univ. v. Prentiss*, 113 F. Supp. 389 (D.D.C. 1953), *aff'd per curiam*, 214 F.2d 282 (D.C. Cir. 1954). Also, delegations of power must include a standard sufficient to guide administrative discretion. See generally E. GELLHORN, *ADMINISTRATIVE LAW AND PROCESS IN A NUTSHELL* 21, 25-28 (1972).

Rather than track all the various constructional and constitutional techniques by which courts might limit the application of this statute, this Note attempts to develop a principle, consonant with the policy basis underlying the statute, by which action pursuant to this statute can be justified. The principle is derived from the apparent intent of the legislature, which canons of construction are designed to discern. See 2A C. SANDS, *STATUTES AND STATUTORY CONSTRUCTION* § 45.05 (4th ed. 1973). This principle is also useful for nondelegation and due process analysis in that it serves as a standard to guide administrative action, and shows a clear relationship between a legislative end and the means chosen. See text accompanying notes 114-37 *infra*.

112. *Jennings v. Connecticut Light & Power Co.*, 140 Conn. 650, 657-58, 103 A.2d 535, 540 (1954); 2A C. SANDS, *STATUTES AND STATUTORY CONSTRUCTION* § 45.05 (4th ed. 1973).

113. See statutes cited note 100 *supra*.

the SCPEA, a coherent statement of legislative policy can be developed for statutes in any way similar to the SCPEA against which courts and municipal governments in many states can more readily determine whether statutes of their particular state authorize extraterritorial public utility land use control, and the extent of such power.

A. *The Policy Basis for Utility Control*

In order to determine the full extent of municipal power to use statutory public utility land use control, it is necessary to examine the policies underlying the statute against which specific questions regarding the scope of the power can be analyzed. Planning statutes in the United States serve two general purposes: First, to encourage local governments to formulate a plan that is capable of influencing the type of development that will promote the "general welfare"; and second, to give local governments the power necessary to implement that plan.¹¹⁴ The power to approve utility extensions is evidently one that the legislature deemed necessary to implement the plan.¹¹⁵ To understand why that power is necessary, and thereby determine the scope of the power, it is useful to understand the functions of the master plan—the program for development that the power to control public utilities is designed to implement.

1. *The Function of the Master Plan*

The general purpose of the master plan is, according to the terms of the SCPEA, to guide and accomplish "a coordinated, adjusted, and harmonious development of the municipality and its environs which will, in accordance with present and future needs, best promote . . . [the] general welfare, as well as efficiency and economy in the process of development"¹¹⁶ Thus, the function of the master plan is twofold; to accomplish the type of development that the community desires, and to guide development in a coordinated manner. The means by which the planning commission is to achieve these goals is set out in various provisions of the Act.

The SCPEA describes the means by which the commission is to formulate development objectives as a staged process involving careful study of conditions affecting development and constant survey of public opinion regarding desirable development.¹¹⁷ In the first stage of the planning

114. See HARR, *The Master Plan: An Impermanent Constitution*, 20 LAW & CONTEMP. PROB. 351, 355-56 (1955).

115. See D. HAGMAN, URBAN PLANNING AND LAND DEVELOPMENT CONTROL LAW § 24, at 57-58 (1971).

116. SCPEA, *supra* note 101, § 7, at 17.

117. It is . . . accurate to define a Master Plan as a process rather than a conclusive statement. It is a pattern for the physical development of the city, a pattern to guide the city builders in locating their investments. . . . It is a design for the physical, sociological, economic, and political framework for the city. . . .
Gallion, *The Urban Pattern*, in LAND USE CONTROLS 40 (1955).

process, the commission must make "careful and comprehensive surveys and studies of present conditions and future growth" ¹¹⁸ Studies of this nature enable the planning commission to survey the conditions affecting the economic forces of development in relation to growth projections and community desires. For example, the commission will survey the community's natural resources to determine the physical limitations making areas suitable or unsuitable for development of a particular type. Also the commission's plan must include the general location and extent of public development, such as streets and public utilities, that affect private development. ¹¹⁹ Study of the factors that influence development, in relation to growth projections, enables the commission to formulate development alternatives. ¹²⁰

In the second stage of the planning process, the commission formulates growth and development objectives that are most consistent with community desires. With knowledge of the potential directions for development, the commission can present development alternatives to the community which in turn can choose the most desirable course of development. This study and proposal process is the stage at which the commission can determine what type of development will best promote the general welfare and formulate growth and development objectives for the municipality. ¹²¹

The master plan's second function is to promote the accomplishment of growth and development objectives in a "coordinated" manner. In the words of the SCPEA, the plan's purpose is "guiding and accomplishing a coordinated . . . development . . . which will best promote . . . efficiency and economy in the process of development." ¹²² The drafters envisioned the master plan of the SCPEA as a framework within which all activities of local governments, and quasi-public bodies, that affected development could be coordinated so that all such activities encouraged or discouraged development in a manner consistent with the development objectives of the community. ¹²³ For example, the master plan must include the location and extent of all public utilities, whether publicly or privately owned, recommendations for "the removal, relocation, widening . . . [or] narrowing, change of use or extension" of such utilities, and a zoning plan. ¹²⁴ Since future decisions regarding public utility extensions and a plan for zoning have a marked effect on the future course of development, ¹²⁵ it is necessary to coordinate them. The master plan is the framework in which these

118. SCPEA, *supra* note 101, § 7, at 16-17.

119. Harr, *supra* note 114, at 357; SCPEA, *supra* note 101, at 16 n.40; *see* Gallion, *The Urban Pattern*, in LAND USE CONTROLS 37-40 (1955).

120. *Compare id.* with Harr, *supra* note 114, at 358.

121. *Compare* SCPEA, *supra* note 101 § 7, at 16-17 & 17 n.41 with Harr, *supra* note 114, at 359.

122. SCPEA, *supra* note 101, § 7.

123. *See, e.g.*, Bassett, *The Master Plan*, in C. HAAR, LAND-USE PLANNING 693 (1959); Harr, *supra* note 114, at 356-60.

124. SCPEA, *supra* note 101, § 6.

125. *Id.* § 6, at 15 n.37; *id.* § 9, at 20 n.51.

activities can be coordinated to achieve the type of development most consistent with the general welfare.¹²⁶

2. *The Purpose of the Grant of Power to Approve Public Utility Extensions*

In order to ensure coordination of all public and quasi-public activities that affect land use and development, the SCPEA gives local planning commissions the power to approve proposed public utility extensions.¹²⁷ Because different branches of municipal government are responsible for different governmental activities that affect development, and because authority for some types of public activity are outside of local government control, the potential for uncoordinated action and consequent disruption of development objectives is quite possible.¹²⁸ The drafters of the SCPEA hoped to avoid these difficulties by giving the master plan a "legal status" and requiring all municipal agencies to coordinate their decisions within the guiding framework constructed by the master plan.¹²⁹

The potential for uncoordinated action arises for several reasons. First, even if the municipality owns and operates the public utility, the dynamics of city government may hamper the coordination and integration of public utility policy and result in utility decisions that conflict with the broad planning objectives contained in the master plan. The Hoover Commission, which drafted the SCPEA, expressed concern that:

[A]s [the city] council proceeds from week to week with its work, pressed by all sorts of pressures to pass this, that, or the other measure, there is great danger, especially in the early stages of the planning movement . . . , that the city plan may come to be ignored or given rather casual attention. . . .¹³⁰

Other factors may also disrupt coordination of development consistent with the master plan. For example, the public utility might be privately owned,¹³¹ or a municipally owned public utility might be held to a duty to serve under the common-law doctrines discussed in the previous section.¹³²

126. Harr, *supra* note 114, at 359-60.

127. SCPEA, *supra* note 101, § 9; see D. HAGMAN, URBAN PLANNING AND LAND DEVELOPMENT CONTROL LAW 57-58 (1971); Harr, *supra* note 159, at 363.

128. Harr, "In Accordance With a Comprehensive Plan", 68 HARV. L. REV. 1154, 1155 (1955).

129. See D. HAGMAN, URBAN PLANNING AND LAND DEVELOPMENT CONTROL LAW 57-58 (1971); SCPEA, *supra* note 101, § 9, at 19-21 & nn.46, 47, 50 & 51.

130. SCPEA, *supra* note 101, § 9, at 19 n.46.

131. See *id.* § 6, at 15 n.37; *id.* at 20 n.51.

132. See text accompanying notes 56-93 *supra*. While the drafters of the SCPEA did not specifically refer to the possibility of uncoordinated public utility extensions due to the common-law duty to serve, they do suggest an analogous situation. In the SCPEA, the drafters accounted for the possibility that a public utility commission would compel an extension that might be inconsistent with planning objectives. SCPEA, *supra* note 101, § 9. See also *id.* § 9, at 20 n.50. The courts that apply the common-law duty to render adequate service serve the same function as a public utility commission enforcing a statutory duty to render adequate service. See *The Duty of a Public Utility*, *supra* note 58, at 312-13. Under the SCPEA both courts and public utility commissions are to consider local planning objectives in enforcing the duty to serve if enforcement of that duty will lead to availability of utility services which is inconsistent with land use objectives in areas in which the municipal government has power to regulate land use. See text accompanying notes 167-68 *infra*.

The need for avoiding uncoordinated action is heightened since such action can devastate planning objectives and the ability of regulatory power to achieve those objectives. As previously stated, the planning-control process is a lengthy one of study, canvassing of public opinion, further study, ultimate adoption of a plan, and public debate.¹³³ During this stage, the commission considers what zoning ordinances are needed to implement that plan. The improvident extension of public utility main lines capable of supporting high density development in areas already planned for low density development, but for which zoning regulations restricting development have not yet been imposed, would have the effect of encouraging development that is inconsistent with development objectives.¹³⁴ Thus, in the early stages of the planning-control process, before zoning laws have been implemented, uncoordinated activity can prevent achievement, through the zoning power, of the type of development that the commission's studies and surveys indicate will be most consistent with general welfare. Furthermore, if a government agency is responsible for the utility extension, economic and political pressures are generated that may prevent the imposition of zoning regulations consistent with community development objectives. The main line extension represents an expensive capital investment in which the municipally owned utility has an economic incentive to derive as much revenue as possible. Thus, municipal government has an economic incentive to encourage development in areas planned for none. Also, during a political debate concerning passage of zoning ordinances consistent with the master plan, the city governors might have difficulty supporting zoning ordinances that would render the expensive utility extension a very bad investment.¹³⁵ As a result, zoning ordinances most consistent with the community's development objectives might not be imposed. Furthermore, even when zoning laws limiting development are already in force, improvident utility extension creates similar economic and political pressures that could lead to the repeal of the zoning ordinances.¹³⁶ This type of uncoordinated action among governmental agencies led the drafters of the SCPEA to authorize the planning commission to review the decisions of other agencies that may have an impact on development.¹³⁷

*B. The Extent of Municipal Power to Control
Public Utilities on the Urban Fringe*

Most states have statutes that embody the policy, if not the precise language, of the SCPEA.¹³⁸ All of these states agree that some type of coordination of public regulation and public development is essential for

133. See notes 118-21 *supra* and accompanying text.

134. See SCPEA, *supra* note 101, § 9, at 19-20 nn.47 & 51.

135. See TASK FORCE ON LAND USE AND URBAN GROWTH, *THE USE OF LAND: A CITIZENS' POLICY GUIDE TO URBAN GROWTH* 125-26 (1973).

136. *Id.*

137. See text accompanying notes 122-34 *supra*.

138. See statutes cited note 97 *supra*.

proper land use planning.¹³⁹ Statutes similar to the SCPEA clearly contemplate that the planning commission may disapprove a utility extension, and, if that action is not overruled by the city government, the public utility must act in a manner consistent with the determination of the planning commission,¹⁴⁰ irrelative of whether the utility is publicly or privately owned. In short, a municipal government can use public utility land use control to some extent. As previously discussed, however, the scope of authority delegated to municipalities under the SCPEA is ambiguous in two respects. First, it is not clear from the terms of the statute whether a city's power to control public utilities can be exercised extraterritorially. Second, the reasons for which a city can legitimately refuse to extend service are not delineated. The following sections examine the ambiguities in light of policy underlying the SCPEA.

1. *Statutory Authority to Control Public Utilities on the Urban Fringe*

The SCPEA grants planning commissions the power to withhold au-

139. The statutes cited in note 97 *supra* can be categorized into four types, according to similarities of language. Each type supports the principle that local governments should be able to coordinate public utility policy with other government action which affects land use and development.

Most of these statutes are very similar to the SCPEA, in that they provide for referral to and approval by the planning commission of all public utility extensions. *See, e.g.*, ALA. CODE tit. 11, § 11-52-11 (1975); ARK. STAT. ANN. § 19-2827(f) (1968). As was demonstrated above, the policy basis of this referral is to promote a coordinated program of land use control. *See* text accompanying notes 127-34 *supra*.

A few states provide for the "reference of any other matter or class of matters to the planning board." N.J. STAT. ANN. § 40:55D-26(b) (West Supp. 1976); N.Y. GEN. CITY LAW § 30 (McKinney 1968). The planning enabling act also provides that the planning commission prepare a plan which must show the general location and extent of public utilities. N.Y. GEN. CITY LAW § 28-a (McKinney 1968). The provisions for referral have been authoritatively construed.

[While this] language is very broad, . . . its scope is not unlimited. The device cannot be used, willy-nilly, as a catch-all or depository for just every type of municipal problem. It must be read and interpreted in the light of the context of the whole section, *i.e.*, the broad and general subject of planning and physical development of the municipality."

Saddle River Country Day School v. Borough of Saddle River, 51 N.J. Super. 589, 603, 144 A.2d 425, 432 (1958). Under this standard, since the location of public utilities affects the "physical development of the municipality," and the legislature has prescribed that the location and extent of public utilities is a proper subject of planning, there is little doubt that proposed public utility extensions can be referred to the planning commission for approval. The master plan may be used as a coordinating framework for all government activities which affect planning and physical development.

A third type of statute provides for planning commission recommendations for government action in regard to municipal improvements. *E.g.*, IND. CODE ANN. § 18-7-5-32 (Burns 1974); MONT. REV. CODES ANN. § 11-3831 (1968). The drafters of this type of statutes surely contemplated that local government could act on the recommendation of the planning commission. Under these statutes, coordination, while not mandatory as under the SCPEA, is possible.

A fourth type of statute explicitly states that all government activities which affect development are to be coordinated. *E.g.*, ARIZ. REV. STAT. § 19-461.07(B) (Supp. 1975); CAL. GOV'T CODE § 65304 (West 1966). For example, the California statute specifically provides that the master plan must include a circulation element consisting of the general location and extent of public utilities and other local government projects, "all correlated with the land use element of the plan." CAL. GOV'T CODE § 65302(b) (West 1966).

140. *See* note 139 *supra*.

thorization for all public utilities whether publicly or privately owned. The extent of a municipality's ability to use this statutory power to employ public utility land use control on the urban fringe is unclear because the language in the SCPEA regarding whether it is an extraterritorial or intraterritorial grant of power is ambiguous. It is possible to construe the language of the standard act either way. Since the policy of the statute is to promote coordination of public utility extensions with regulatory land use controls, however, whether public utility land use control can be used extraterritorially depends upon the extent of extraterritorial *regulatory* power given to municipal governments under state statutes.¹⁴¹

The SCPEA provides that the planning commission has the power to "make and adopt a master plan for the physical development of the municipality, including any areas outside of its boundaries which . . . bear relation to the planning of such municipality."¹⁴² The SCPEA further provides that

[w]henever the commission shall have adopted the master plan of the municipality, or of one or more major sections thereof, . . . no public utility shall be constructed . . . in the municipality or in such planned section or district . . . without approval by the planning commission.¹⁴³

This language can be construed in two ways with respect to the amount of extraterritorial jurisdiction conferred.

One can read the SCPEA in a way that would give the local planning commissions no power to approve public utility extensions outside municipal boundaries. Under this construction, the planning commission's power to approve public utility extensions is contingent on the adoption of the master plan encompassing only the municipality.¹⁴⁴ Although the master plan may include territory outside municipal limits, the SCPEA gives the planning commission the power to approve utility extensions when the master plan for the development of territory within city limits is completed.¹⁴⁵ This suggests that the SCPEA grants only intraterritorial power. Furthermore, the terms of the SCPEA expressly provide that "no public utility . . . shall be constructed . . . in the municipality."¹⁴⁶ When read in this manner, the power to approve public utility extensions is an intraterritorial power.¹⁴⁷

It is also possible, however, to read the SCPEA as conferring extraterritorial power to control public utilities. Section 2 of the Act empowers any municipality to make a "municipal plan."¹⁴⁸ Section 6 describes this plan as a "master plan for the physical development of the municipality, including any areas outside of its boundaries which . . . bear relation to the planning

141. See text accompanying notes 152-57 *infra*.

142. SCPEA, *supra* note 101, § 6 (emphasis added).

143. *Id.* § 9.

144. *Id.*

145. *Id.*

146. *Id.*

147. *Id.* § 9, at 20 n.48.

148. *Id.* § 2.

of such municipality.”¹⁴⁹ This definition of the plan becomes relevant to correctly construing the following section that provides: “[w]henever the commission shall have adopted the master plan of the municipality or of one or more major sections or districts thereof no . . . public utility . . . shall be constructed . . . in the municipality or in such planned section and district.”¹⁵⁰ If “master plan of the municipality” is synonymous with “municipal plan”—which describes territory outside of municipal boundaries—the planning commission has the power to approve public utility extensions in the municipality or in any section that is described by the municipal plan—including areas outside municipal boundaries.¹⁵¹

While the territorial limitations of the power to approve public utility extensions are not clear on the face of the statute, it is possible to determine the extent of the extraterritorial power conferred by resort to the policies underlying the enabling statute. In states that have given municipal governments the power to regulate land use on the urban fringe, municipal governments should also have the power to control public utility extensions in the fringe area.¹⁵² The footnotes to the SCPEA explain that the drafters limited the power to control public utilities to areas within territorial limits because such a limitation is “obviously proper and in many states would be imposed by Constitutional considerations.”¹⁵³ In those states authorizing extraterritorial zoning,¹⁵⁴ however, the legislatures have not subscribed to the explanation in the Standard Act. The fact that the legislature has authorized extraterritorial land use regulation is persuasive evidence that the legislature does not consider extraterritorial public utility land use control improper. Furthermore, the purpose of the grant of power to control public utilities is to insure coordination between land use regulation and public utility extensions.¹⁵⁵ It is necessary, therefore, that a municipal government have the power to control public utilities in all areas in which it has power to regulate land use in order to achieve the coordination envisioned by the drafters of the SCPEA. Finally, since courts have uniformly upheld the constitutionality of municipal extraterritorial land use regulation that is pursuant to state authority,¹⁵⁶ the SCPEA drafters’ concern that

149. *Id.* § 6.

150. *Id.* § 9 (emphasis added).

151. Two courts seem to have accepted this interpretation. *See* *Roberson v. City of Montgomery*, 285 Ala. 421, 425, 233 So. 2d 69, 71-72 (1970) (dictum); *Robinson v. Boulder*, 547 P.2d 228, 230-231 (Colo. 1976). For this Note’s reading of the *Robinson* decision, see note 106 *supra*.

152. Some statutes expressly provide that the power to plan, zone, and control public utility extensions may all be exercised within the same territorial limits. *E.g.* MO. REV. STAT. § 89.145 (1969); N.M. STAT. ANN. § 14-18-5 (1973).

153. SCPEA, *supra* note 101, § 9, at 20 n.48.

154. *See, e.g.*, KAN. STAT. ANN. § 12-715b (1975); MINN. STAT. § 462.357 (1974). Both of these states authorize extraterritorial zoning, but have retained language similar to the SCPEA for their provisions relating to referral of proposed utility extensions to the planning commission. KAN. STAT. ANN. § 12-704a (1975); MINN. STAT. § 462.356 (1974).

155. *See* text accompanying notes 127-36 *supra*.

156. *See, e.g.*, *Schlientz v. City of North Platte*, 172 Neb. 477, 489-90, 110 N.W.2d 58, 66-67

extraterritorial public utility control might be unconstitutional is unfounded. Accordingly, to give full effect to the policy underlying the statutory grant of power to municipal governments, cities should be able to exercise public utility control in areas in which they have the power to directly regulate land use and development.¹⁵⁷

2. *The Extent of Municipal Power to Control Public Utilities in General*

The SCPEA gives a planning commission the power to approve or disapprove of public utility extensions. Only two explicit limitations on that power exist. First, the municipal government or other government body that has jurisdiction over the utility may overrule the planning commission. And second, the actions of the governing body must be a matter of public record.¹⁵⁸ The Act seems to contemplate that political pressure will restrain the use of this power. To the extent that this power may be used extraterritorially, however, courts may not agree with the premise of the Act since they are reluctant to have fringe residents governed by municipal governments that are politically accountable only to city dwellers.¹⁵⁹ Accordingly, the courts may read the Act as conferring a more limited power than the language seemingly allows.¹⁶⁰ Since the courts attempt to construe a statute to give full effect to the legislative intent,¹⁶¹ however, it is possible to determine the extent of municipal power to control public utilities by considering specific applications of this power in reference to the policy underlying the statute.

The drafters of the SCPEA intended to promote an orderly, coordinated development that would best promote the general welfare. In order to implement this intention, the SCPEA authorizes municipal governments to plan for such development, and to coordinate all public and quasi-public activities that affect development within the framework of that plan.¹⁶² Land use regulations and the availability of public utility services are examples of activities that affect development. While the master plan is still in the formulative stages, and before regulatory powers are invoked to

(1961); *City of Raleigh v. Morand*, 247 N.C. 363, 366-67, 100 S.E.2d 870, 873-74 (1957); *Walworth County v. City of Elkhorn*, 27 Wis. 2d 30, 37-38, 133 N.W.2d 257, 261 (1965); cf. Becker, *Municipal Boundaries and Zoning: Controlling Regional Land Development*, 1966 WASH. U.L.Q. 1, 30-58 (suggesting constitutional limitations on a state's ability to confer extraterritorial zoning power).

157. Some states' statutes are free from this territorial ambiguity. In those states extraterritorial planning and zoning jurisdiction is co-extensive. *E.g.*, MO. REV. STAT. § 89.145 (1969); N.M. STAT. ANN. § 14-18-5 (1973).

158. SCPEA, *supra* note 101, § 9.

159. See, e.g., *Robinson v. City of Boulder*, 547 P.2d 228, 230-31 (1976); *American Sign Corp. v. Fowler*, 276 S.W.2d 651, 655 (Ky. 1955). The reason for such a strict construction was voiced in *Smeltzer v. Messer*, 311 Ky. 692, 696, 225 S.W.2d 96, 97-98 (1949) (land use control on the urban fringe "seriously impairs the rights of a person owning property beyond its limits who has no voice in its legislative policies . . .").

160. See *City of Heath v. Licking County Regional Airport Auth.*, 16 Ohio Misc. 69, 78-79, 237 N.E.2d 173, 179-80 (Licking County Ct. C.P. 1967).

161. See authority cited note 112 *supra*.

162. See text accompanying notes 127-37 *supra*.

implement the plan, there is a danger that an improvident public utility extension will disrupt the city's goal of orderly development. Furthermore, after regulatory powers have been invoked to implement the plan, coordination of public utility extensions with land use regulations is essential to the municipal goals of controlling the timing and location of development.¹⁶³ With this policy in mind, the parameters of municipal power to control public utility extensions can be determined.

Even though the Act fails to explicitly restrict the reasons for which local governments can disapprove public utility extensions,¹⁶⁴ the underlying policy of the statute suggests that limits are intended. The drafters of the Standard Act did not intend to confer upon cities the power to disapprove utility extensions arbitrarily.¹⁶⁵ Nor was it their intent to give municipal governments a method of land use control that could be used independent of regulatory controls. Rather, the drafters intended to create a mechanism by which city governments could coordinate public utility extensions with regulatory powers within the guiding framework of the master plan.¹⁶⁶ To comply with this standard, a city using the public utility land use control authorized by the SCPEA must show that a refusal to approve a public utility extension is, first, consistent with the planning objectives of the master plan;¹⁶⁷ and second, that the proposed extension is not coordinated with proposed or actual land use regulations designed to

163. See text accompanying notes 135-36 *supra*.

164. Many states, unlike the SCPEA, specifically mandate coordination between all elements of the land use plan, or at least specifically require the planning commission's review to be concerned with conformity with the master plan. See, e.g., ARIZ. REV. STAT. § 9-461.07(B) (1977) (planning commission to prepare a coordinated program of public works); ARK. STAT. ANN. § 19-2827(f) (1968) (planning commission to review proposed public utility extensions regarding conformity with plan); CAL. GOV'T CODE § 65401 (West 1966) (all plans for proposed public works must be submitted to a coordinating agency); FLA. STAT. ANN. § 163.3194 (West Supp. 1977) (all elements of local plan must be coordinated); KAN. STAT. § 12-704a (1975) (planning commission to review proposed utility extensions regarding conformity with plan); KY. REV. STAT. § 100.183 (1971) (elements of plan to be interrelated, and describe how each relates to each other and to the statement of development objectives).

165. This is evident from the structure of the Standard Act. If the planning commission exercises its power to disapprove a utility extension, it must communicate its reasons therefor to the government body having ultimate jurisdiction over the utility. SCPEA, *supra* note 101, § 9. This suggests the drafters anticipated that any disapproval have a basis in planning needs and objectives, and gave the governmental body in charge of the utility the duty of reviewing planning commission determinations to guard against arbitrary disapproval.

166. See notes 126-36 *supra* and accompanying text.

167. Bassett, one of the drafters of the SCPEA, argued that the plan was merely advisory and that even though coordination is necessary, the coordination function of the master plan is an advisory one. See Bassett, *The Master Plan*, in C. HARR, LAND-USE PLANNING 693-98 (1959). The footnotes to the SCPEA heavily stressed the advisory nature of the plan. See SCPEA, *supra* note 101, § 8, at 18 n.44. On the other hand, it is clear that the drafters intended that the plan have some weight. "The Act contemplates that the planning commission shall not only make the plan but also have a strong influence in protecting the plan against departures and in getting the plan carried out." *Id.* § 2, at 7 n.8.

More specifically, the drafters intended that planning commission review of proposed utility extensions to be of more force than a mere advisory opinion. If it were otherwise, they would not have provided that city government could only overrule a disapproval of the planning commission by a two-thirds majority vote. See *id.* § 9.

implement the plan.¹⁶⁸ If, for example, it is apparent that a proposed utility extension will disrupt planning objectives before zoning regulations can be implemented to protect those planning objectives, or if lack of coordination of public utility extensions with zoning regulations will disrupt development timing and location control, disapproval of such an extension should be fully consistent with the policy of coordination underlying the SCPEA.

Central city governments should, under the above analysis, have sufficient power to use statutory public utility land use control to the extent necessary to effectuate the coordination function of the master plan. Those governments, in states with statutes similar to the SCPEA, should be able to control the location and extent of public utilities in order to coordinate the location of public utilities with regulatory power over land use and development. So long as the area in which statutory public utility land use control is exercised, and the purposes for which it is asserted is justified by the need to coordinate public utility extensions with land use regulations, statutes similar to the SCPEA authorize public utility land use control.

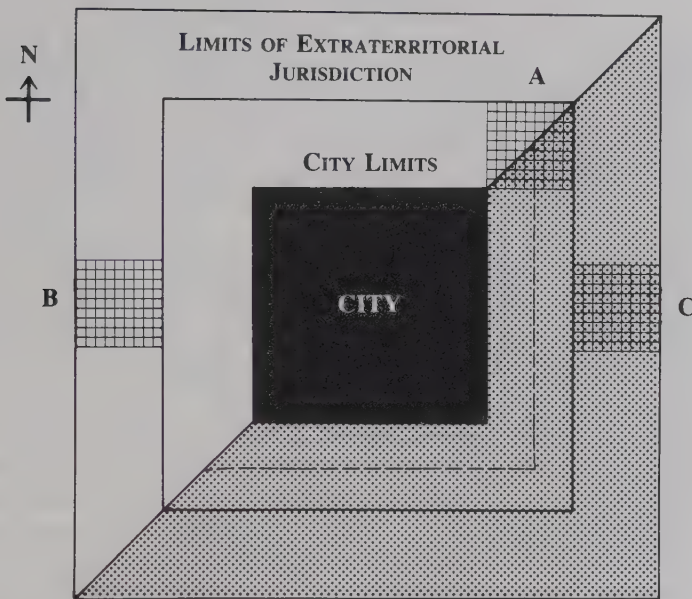
III. APPLICATION OF THE STATUTE AND COMMON LAW

While their power is not unlimited, local governments do have important powers over the location and extent of public utilities under the analysis suggested by this Note. Since the analysis was, because of the subject matter involved, rather lengthy and abstract, it is useful to summarize it here with the aid of concrete examples.

Figure 1 represents the development objectives and problems of a hypothetical city. Municipal limits and the extent of a city's extraterritorial regulatory power over land are identified. The blackened area represents present high density development. The development objectives of the city are as follows: First, the city would like to discourage high density development in all clear areas illustrated in Figure 1; second, the city would like to encourage development in the gray areas of Figure 1, but only to the extent of half of its extraterritorial jurisdiction every five years. This timing objective is illustrated by the dotted line between city limits and the limits of extraterritorial regulatory power. The cross-hatched areas A, B, and C represent three areas in which private developers have proposed high-density development projects and have petitioned the local water and sewage utility for service. Assume that the city has enacted, or plans to enact, valid zoning regulations in all areas in which it has the power to zone in order to achieve its development objectives.

168. As was demonstrated above, coordination is essential in the early stages of the planning process—before zoning ordinances have been implemented—and after zoning ordinances have been implemented. See text accompanying notes 133-36 *supra*. Thus, a local government should be able to refuse a utility extension which is inconsistent with proposed or actual land use regulations.

FIGURE 1



If the city must rely on the common-law rules regarding public utilities, the city will probably be unable to accomplish its land use goals. If the city does not own the water utility and the water utility refuses to cooperate, the city cannot control the location and extent of public utilities. Furthermore, even if the city owns and operates the utility, the city will be unable to accomplish land use objectives by refusing to extend utility services to any of the proposed developments because of the limited application of the common-law rule. Proposed development project *A* represents the classical tap-in to city services and illustrates the city's inability to accomplish development location controls under the common law. Since extension of water services to *A* does not involve an expensive extension of the utility's distributive system nor any political decisions regarding the allocation of municipal revenues, the courts will compel extension in the absence of a utility-related reason for refusal of service.¹⁶⁹ The city could, of course, enact zoning ordinances to discourage development project *A*, but it may not accomplish development location objectives by using public utility land use control as an independent method of development control.

Proposed development projects *B* and *C* represent the development problems of the city that cannot be solved by zoning or the common law. If *B* and *C* are willing to pay for extension of the distributive system, approval of that extension will be classified as a "proprietary" function that the utility, absent a utility-related reason, cannot refuse.¹⁷⁰ This duty to serve

169. See note 81 *supra* and accompanying text.

170. See note 81 *supra* and accompanying text.

disrupts the city's development location objectives and its development timing goals. In the case of *B*, the forced availability of municipal services and the inability to enforce an applicable zoning ordinance allows development in an area in which the city would like to discourage it. In the case of *C*, available utility services and the inability to zone allows development that the city planned to discourage for ten more years. Even if *B* and *C* are not willing to pay for the proposed utility extension, if they can prove that the only reason their request for services was denied was because of land use objectives, the city's refusal to provide municipal services will be held to be an inappropriate use of municipal discretion and service will be compelled.¹⁷¹ Thus, the city will not be able to accomplish any of these land use and development objectives if its sole justification for a refusal of service is that such refusals are authorized by the "municipal discretion" afforded by the common law to municipally owned public utilities.

Under the authority of statutes similar to the SCPEA and the analysis suggested by this Note, however, the city should be able to solve some of the hypothetical land use problems. Proposed development *A* represents a case in which the city can accomplish both location and development controls through the coordination of public utility extensions, regardless of the form of the utilities ownership, and land use regulation. *A* is in a position that would disrupt both the development location and timing objectives of the city. Half of *A* is located in the clear area in which the city would like to discourage high density development totally; and approximately one-third is located in an area in which the city would like to discourage development for another five years. Thus, somewhat less than one-sixth of the area proposed for development by *A* is consistent with the city's land use objectives. It was suggested in the preceding section of this Note that the city may prevent the extension of water services to *A* insofar as the extension would be inconsistent with the coordination function of the master plan.¹⁷² For example, one coordination function is to assure that improvident utility extensions do not disrupt the planning process before planned zoning regulations are enacted.¹⁷³ Thus, even if no zoning ordinances are currently in force, the city can refuse to extend water and sewage lines as long as zoning ordinances are planned for the implementation of these land use objectives in areas in which the city has the power to zone.¹⁷⁴ In this case, the city need only approve a utility extension to the gray area west of the dotted line, thereby achieving both development timing and location objectives. Furthermore, the city can more effectively allocate limited revenues devoted to utility extensions by extending services into areas south of *A* in order to encourage *A* to develop those areas

171. See notes 68, 82-84 *supra* and accompanying text.

172. See text accompanying note 162-68 *supra*.

173. See text accompanying note 134-36 *supra*.

174. See text accompanying notes 167-68 *supra*.

instead. Subsequently, the city can enact zoning ordinances to further implement these development objectives.¹⁷⁵

B and *C* represent areas in which the city will not be able to completely discourage development. They serve to illustrate, however, another distinct advantage of the SCPEA over the common-law analysis. Using the common-law analysis, the city must serve both *B* and *C*, absent a utility-related reason for refusal, if *B* and *C* are willing to pay for the extension or can prove that the city's refusal to serve them is based exclusively on land development objectives.¹⁷⁶ This produces the anomalous result of forcing a city government to pay for the disruption of land use objectives in areas in which it has the power to regulate land use, as well as areas in which it has no such power. If the city is forced to pay for extensions into *B* or *C* before zoning regulations can be enacted to implement land use objectives within the limits of the city's extraterritorial land use jurisdiction, it is likely that such regulations will never be enacted. After committing the large amount of municipal revenues that are required to extend the municipal utility system, the city will have a powerful economic incentive to capitalize more fully on that investment by allowing more customers to tap into the main line. Furthermore, even if zoning ordinances are in force at the time of the extensions to *B* and *C*, there is the danger that the municipality will find it politically expedient to revoke the zoning ordinances. These ordinances limiting development will be particularly difficult to defend in the political arena against the objections of potential customers. Moreover, the compelled utility extension will consume limited municipal revenues devoted to utility extensions which, in terms of a comprehensive land use policy, would be better devoted to encouraging development in areas in which development is planned. Thus, the application of the common law forces municipal governments to subject themselves to economic and political pressures that disrupt a comprehensive land use regulation program.¹⁷⁷

While the SCPEA analysis would not allow city governments to completely discourage proposed developments *B* and *C*, its application will make the extension compelled by the common law less disruptive of land use objectives within the extraterritorial limits of the city's regulatory power, and enable city governments to discourage developments *B* and *C* to some extent. *B* and *C* are outside of the area in which the city is authorized to regulate land use. Under the analysis suggested by this Note, a city will not be able to actively control utility extensions outside of that area, because it has no regulatory powers with which to coordinate the control of public utilities.¹⁷⁸ To the extent that the municipality is forced to

175. See text accompanying notes 167-68 *supra*.

176. See note 80 *supra* and accompanying text.

177. See text accompanying note 126-36 *supra*. These political and economic pressures disrupt the planning-zoning process. This type of uncoordinated action is the type the drafters of the SCPEA hoped to avoid by requiring all proposals for public utility extensions to be reviewed by the planning commission.

178. See text accompanying notes 167-68 *supra*.

pay for the extension, however, one can argue that the payment would generate political and economic pressures that would disrupt a coordinated and comprehensive land use regulation program that statutes like the SCPEA were designed to avoid. If, on the other hand, the developer had to pay for the extension, political and economic pressures of the same degree would not be as disruptive to the city's land use program. Thus, while a municipal government could not actively discourage development projects *B* and *C*, the city would not be forced to pay for extensions that disrupt the planning and zoning program within the areas of land use control jurisdiction. Furthermore, insofar as the developer must pay for all such extensions, the higher cost of development projects like *B* and *C* will, in fact, discourage them.

IV. CONCLUSION

Under the SCPEA and similar statutes municipal governments have not only a more powerful method of public utility land use control than is possible under the common law, but also a more consistent one.

Whether public utility land use control is successful under the common law depends upon the extent to which a municipal government can successfully explain the refusal to extend service in terms of a "utility-related reason." Such reasons are totally alien to land use and development control.¹⁷⁹ Under the statutory provisions analyzed by this Note, the legitimacy of public utility land use control will be determined by an analysis of factors relevant to land use planning. Withholding of utility services is justified if the availability of services would conflict with development objectives and extant or proposed land use regulations.¹⁸⁰ Thus, courts can resolve these questions pertaining to the legitimacy of public utility land use control in a more intellectually satisfying manner by resort to the policy underlying statutes similar to the Standard Act.

Perhaps the best justification for the statutory analysis suggested in this Note is that it places a premium on the legislative balance of competing interests in the urban fringe.¹⁸¹ Municipal governments have development interests in the urban fringe, since it is likely that this area will become part of the municipality.¹⁸² The interests of the fringe area residents in having a representative local government¹⁸³ and the interests of the government of the fringe area in determining land use policies without interference from a neighboring central city government are the competing interests involved in the urban fringe controversy. The only body competent to strike the needed balance is the state legislature which is responsible to residents of

179. See text accompanying notes 60-68 *supra*.

180. See text accompanying notes 167-68 *supra*.

181. See text accompanying note 112 *supra*.

182. See notes 2-4 *supra* and accompanying text.

183. See text accompanying note 36 *supra*.

both the city and fringe.¹⁸⁴ In some states, the state legislatures have given local municipal governments the power to regulate land use on the urban fringe, as well as the power to coordinate public utility extensions with zoning power. In these states the state legislatures balanced the competing interests and gave municipal governments the power to directly regulate land use and the authority to coordinate public utility land use control in order to effectively control development. Otherwise, city governments should have no authority to exercise either type of land use control on the urban fringe. The analysis of the common law and the SCPEA offered by this Note makes this legislative determination dispositive of the question of the extent of municipal authority to exercise public utility land use control.

Thus, municipal governments have ample authority under state legislation to use public utility land use control to supplement the exercise of their extraterritorial powers to regulate land use and development. With this authority, municipal governments can more effectively control the timing and location of development than is possible through the use of regulatory powers alone. However, neither the common law nor statutes similar to the SCPEA give municipal governments the power to use public utility land use control as an independent method of development control. Public utility land use control must be coordinated with valid regulatory powers, and the exercise of public utility land use control is subject to the same territorial limitations imposed by state legislatures on the direct regulation of land use and development.

184. See text accompanying note 37 *supra*. That balance is in the nature of a political question and does not involve the type of principled determination for which courts are competent to decide. Thus, the courts applying the common law should refuse to strike such a balance between these competing interests, and they have in fact done so. Instead, the courts should look to state legislation as the primary source of authority in questions of this nature. See Sandalow, *The Limits of Municipal Power Under Home Rule: A Role for the Courts*, 48 MINN. L. REV. 643, 683, 699-700 (1964).

Part 7

Fiscal Analysis: A New Land Use Tool

FISCAL IMPACT ANALYSIS AS A TOOL FOR LAND USE REGULATION†

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To what extent can a municipality legally regulate land use within its borders on the basis of the costs to the public resulting from such use? The authors answer this question by examining the degree to which various state enabling statutes, authorizing comprehensive plans, zoning, variances, subdivision controls, planned unit developments, and annexations, permit the use of fiscal impact analysis and consider how these statutes have been interpreted and applied by the courts.

The Need to Know Fiscal Impact

In times of continued inflation and consequent strain on municipal budgets, elected officials and municipal department heads must be aware of the public costs associated with private development, major rezonings, annexations, or alternative land use plans. They must be able to project resident and school-age-children populations attributable to development, the numbers of public employees—policemen, firemen, teachers, etc.—who must be hired, and the kinds of municipal facilities needed to serve the changing population.

In response to these needs, techniques for evaluating the public costs of land development have emerged and have been incor-

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porated within the planners' tool kit. These techniques are termed methods of fiscal impact analysis. They vary from using depth studies of changes in site specific, municipal/school-district servicing costs to average public manpower levels of comparable cities as guides to project the future local costs of fire, police, public works, primary/secondary education, etc., that will occur as a function of new, local land development.

Fiscal impact analysis provides municipal officials with a potentially powerful tool, a method whereby they can estimate the net impact of existing and future development on the fiscal well-being of their communities. Questions must be answered, however, before this analytical device can hope to gain broad professional acceptance. To begin, fiscal-impact analysis must live up to its promise. It must show that it can be used to project correctly the costs and revenues of the various types and configurations of land use.

Yet, even if as a planning device fiscal impact analysis does successfully meet the test, a second test awaits the larger conceptual issue. Are fiscal impact considerations legitimate components of local land use policy? Although more than fifty years have passed since the U.S. Supreme Court recognized that zoning was a proper exercise of police power,¹ the exact limitations of a locality's ability to regulate land use within its borders are yet to be defined. In fact, with the constantly increasing trend toward more numerous and more sophisticated methods of land use control, the boundaries of police power in this area are becoming increasingly open to speculation.

Fiscal Impact vs. Housing Needs

Since the first decisions established zoning as a legal device for the control of land development, a myriad of techniques for land use regulation have emerged. They include subdivision regulation and site-plan review, planned unit development, planned residential (commercial/industrial) development, and cluster development. Additionally, the complex notions of the transfer of development rights and of a site's "holding capacity" have recently become potential factors in a locality's policy for land use control. Yet, persistent legal questions remain about the extent to which these

¹ *Euclid v. Ambler*, 272 U.S. 365 (1926).

techniques may be utilized by land use regulatory agencies. One noted authority in his treatise on land use states, in fact, that we are quickly moving to a realization that local regulations are not by definition beneficial and in the public interest, but rather may serve a nonlegitimate purpose, be the product of parochial vision, be unduly harsh with little compensating public benefit, or merely be inept.²

Added to these numerous issues concerning the extent of police power as it applies to land use control is the critical question, presently raised, of whether fiscal impact considerations may properly be included in land use planning. This question is of utmost significance given several jurisdictions' recent identification of "exclusionary zoning." At issue is whether fiscal considerations, albeit accurate and made in good faith, are to be so weighted as to justify land use regulations which are exclusionary. Does a municipality, for example, have the right to limit either minimum building-lot size or a dwelling unit's maximum number of bedrooms and thereby deny entrance to families who, because of lower income or larger size, receive more local services than they pay for in taxes? From this perspective, land use regulation based on fiscal impact considerations clearly involves serious social questions.

Courts may therefore be asked to resolve this conflict between local fiscal responsibility and the need for housing, typically for low- and moderate-income families. Many traditional land use devices will consequently be taken to task, including large-lot zoning, prohibitions on multifamily dwellings, bedroom restrictions, minimum floor-space requirements, low-income housing exclusions, building moratoria, mobile home prohibitions, environmental impact requirements, and, often as common as these others, municipal refusals to provide services to new developments. The courts will have to balance responsible municipal planning with exclusionary zoning practices.

Nonetheless, in all but a few jurisdictions, the question as to the applicability of fiscal impact considerations as a basis for the administration of land use regulations remains at present very much unresolved. And, as noted, in those jurisdictions where fiscal impact considerations have been reviewed, the courts often base their

² Williams, "The Future of Land Use Controls" in *Future Land Use* 30 (Burchell & Listokin, Eds. 1975).

decisions on ethical considerations raised by exclusionary zoning.³ In these jurisdictions, moreover, and in New Jersey in particular, where land use decisions that are based on a project's impact on the *local tax rate* have been held invalid, the question may be open as to whether a local regulatory agency may consider other public health and safety constraints such as a proposal's impact on existing local sewerage facilities or drainage capabilities, absent massive capital improvements, as a reason for municipal rejection.⁴ Consequently, the use of fiscal impact considerations as an element of local land use policy is often related to the specific facts under review, and no general statement about the validity of fiscal impact considerations has yet emerged from the courts.

State Enabling Legislation Authorizing Fiscal Impact Considerations

What then are the legally acceptable roles for the application of the fiscal impact techniques? A survey of state enabling legislation is a first step in answering that question. Only by beginning with the state enabling statutes, from which local and county governments derive their planning and zoning powers, can the very nature and scope of those powers be delineated.

The areas examined by a survey of state enabling legislation were selected with the understanding that they represent the steps within the planning process most amenable to the application of fiscal impact analysis. Sections of state enabling legislation authorizing zoning, variances, comprehensive and master plans, subdivision controls, annexation, planned unit developments, and state land use laws were examined in an effort to determine if they required, permitted, or prohibited the application of fiscal impact analysis.

³ See *Green v. Township of Lima*, 40 Mich. App. 655 (1972); *Snookler v. Township of Wheatfield*, 46 Mich. App. 162 (1973); *National Land & Inv. Co. v. Kohn*, 419 Pa. 504 (1965); *Township of Williston v. Chesterdale Farms, Inc.*, 7 Pa. Commw. 453, *aff'd* 462 Pa. 445 (1975); *In re Girsch*, 437 Pa. 237 (1970).

⁴ See *Southern Burlington Co. NAACP v. Mount Laurel Township*, 67 N.J. 151 (1975); *Oakwood at Madison v. Madison Township*, 117 N.J. Super. 11, 18 (Law Div. 1971), *on remand* 128 N.J. Super. 438, *aff'd* 72 N.J. 481 (1977); *Town of Gloucester v. Divio's Mobile Home Court, Inc.*, 111 R.I. 120 (1973).

Comprehensive Planning

The enabling legislation authorizing the formulation of a comprehensive plan serves primarily to initiate the planning process. The function of such a plan is to provide a rational basis for future growth. Although not legally binding by itself, its impact is based on the requirement that zoning ordinances "be made in accordance with a comprehensive plan."⁵ Consequently, a zoning ordinance that is not in accordance with a comprehensive plan would probably be declared invalid.

The survey indicates that there exist three basic models for an enabling statute. Fourteen states⁶ have passed a basic statute essentially providing only that the plan include a proposal for the physical development of the community. Nothing specific is said about policy recommendations or planning goals. A typical example of such an authorization is the South Dakota statute (S.D. Compiled Laws Ann. § 11-6-14) which simply states that the comprehensive plan shall include "recommendations for the said physical development" of the municipality.

The second group of statutes, found in eleven jurisdictions,⁷ tends to build upon the premise of the first. Not only do they encourage physical considerations to be contained in the plan, they also require a public facilities component, i.e., how the municipality will provide for necessary public services. Arizona (Ariz. Rev. Stat. § 9-461) and Arkansas (Ark. Stat. Ann. § 19-2827) are typical examples; i.e., the physical development plan "must (shall) include a public facilities component."

⁵ Standard State Zoning Enabling Act § .3.

⁶ Alaska Stat. § 29.33.085; Del. Code, Tit. 22, §§ 702 et seq.; Ga. Code Ann. § 69-802; Kan. Stat., § 12-704; Me. Rev. Stat., Tit. 30, § 4952; Minn. Stat. Ann. § 462.355 (West); Miss. Code Ann. §§ 28905, 3374-123; Okla. Stat. Ann., Tit. 11, § 423 (West); Ore. Rev. Stat. § 227.090; Pa. Stat. Ann., Tit. 53, § 12129 (Purdon); S.D. Compiled Laws Ann. § 11-6-14; Tex. Civ. Code Ann., Tit. 28, § 1011m.; Utah Code Ann. § 10-9-20; Wash. Rev. Code Ann. § 35.63.100.

⁷ Ariz. Rev. Stat. § 9-461; Ark. Stat. Ann. § 19-2827; Cal. Gov't Code §§ 65301 et seq. (West); D.C. Code § 1-163; Hawaii Rev. Stat., Tit. 13, § 201-23; Ill. Ann. Stat., Ch. 24, § 11-12-5 (Smith-Hurd); Ind. Code Ann. § 18-7-5-32 (Burns); Mass. Ann. Laws Ch. 41, § 81D (Michie Law Co-op); N.Y. Town Law § 272a (McKinney); Ohio Rev. Code Ann. § 713.02 (Page); P.R. Laws Ann., Tit. 23, § 8.

The third group, which includes twenty-seven states,⁸ notes that a comprehensive planning program must have as one of its purposes the promotion of "efficiency and economy" in the land-development process. An example is the New Mexico statute (N.M. Stat. Ann. § 14-8-9) dealing with the purposes of a master plan:

"The plan shall be made with the general purpose of guiding and accomplishing a coordinated, adjusted, and harmonious development of the municipality, which will, in accordance with existing and future needs best promote health, safety, morals, order, convenience, prosperity or the general welfare as well as efficiency and economy in the process of development."

Or, as a further example, reference may be made to Vermont's enabling legislation (Vt. Stat. Ann., Tit. 24, §§ 4382 et seq.): "A utility and facility plan showing present and prospective services; for rural towns the plan shall state the appropriate timing or sequence of land development activities in relation to the provision of necessary community facilities and services."

The extent to which fiscal impact considerations are authorized under these statutes is still unanswered. It can be inferred from twenty-seven states' requirement for "efficiency and economy in the process of development," however, that fiscal impact considerations are emerging as an important factor in determining future growth.

In addition, the Virginia statute refers specifically to the cost of public services and its relationship to the tax burden. In Idaho, Missouri, and Virginia, the growth of public facilities must be related directly to the community's financial resources.⁹ In New

⁸ Ala. Code, Tit. 27, § 791; Conn. Gen. Stat. Ann. § 8-23 (West); Fla. Stat. Ann. § 163.160 (West); Idaho Code § 67-6502; Iowa Code Ann. § 368.7; Ky. Rev. Stat. Ann. § 100.83 (Baldwin); La. Rev. Stat. Ann. § 33:106; Md. Ann. Code, Art. 66B, § 3.05; Mich. Stat. Ann. § 5.2996 (West); Mo. Ann. Stat. § 89.340 (Vernon); Mont. Rev. Codes Ann. § 11-38.01; Neb. Rev. Stat. 19-903; Nev. Rev. Stat. § 278.150; N.H. Rev. Stat. Ann. § 36:13; N.J. Stat. Ann. §§ 40:55-1.10 et seq.; N.M. Stat. Ann. § 14-8-9; N.C. Gen. Stat. § 160A-360; N.D. Cent. Stat. § 40-48-08; R.I. Gen. Laws § 45-22-6; S.C. Code § 5-3-40 Tenn. Code Ann. § 13-503; Vt. Stat. Ann., Tit. 24, § 4382; Va. Code § 15.1-446.1; W. Va. Code § 8-24-16; Wis. Stat. Ann. § 62.23 (West); Wyo. Stat. § 15.1-73.

⁹ Idaho Code § 67-6502; Mo. Ann. Stat. § 89-340; Va. Code § 15.1-446.1.

Jersey, the master plan is to provide for public improvement so as not to impose an excessive financial burden on the taxpayer; and land use regulation has among its goals:

- (1) To promote the establishment of appropriate population densities and concentrations that will contribute to the well-being of persons, neighborhoods, communities, and regions, and preservation of the environment;
- (2) To encourage the appropriate and efficient expenditure of public funds by the coordination of public development with land use policies; and
- (3) To encourage coordination of the various public and private procedures and activities shaping land development, with a view of lessening the cost of such development, and the more efficient use of land.¹⁰

In general, then, it can be concluded that fiscal impact considerations are particularly applicable to comprehensive planning. It is during this stage of planning that the overall implications of alternative developments may best be gauged. Analyzing the fiscal impact of proposed alternatives appears to comply with the intent of both long-standing and newly drawn enabling legislation.

Zoning

The enabling statutes authorizing zoning usually include authorization to regulate physical aspects of developments, such as the height, bulk, and density of the use of land and structures thereon. Further, such enabling legislation authorizes regulation over the nature and purpose for which land may be used. Significantly, the extent of the powers thus granted determines whether fiscal impact considerations are within the scope of the zoning prerogatives in any specified jurisdiction.

In construing these statutes, it is important to note that zoning is inherently based on police power (i.e., the state's power to act so as to promote the public health, safety, and welfare). In the Standard State Zoning Enabling Act, for example, it is found that among the relevant purposes of zoning are "[the promotion] of health and general welfare . . . to facilitate the adequate provision of transportation, water, sewerage, schools, parks, and other pub-

¹⁰ N.J. Stat. Ann. §§ 40:550-1.10 et seq., 40:55d-2(e)(f)(m).

lic requirements.” The scope of the police power, however, has not been definitely established by the courts, nor is it likely that a final limit will be assigned to the actions coming within this rather broad judicial concept. Instead, it becomes necessary to examine within the context of each state’s case law the nature of the interpretations given to the police power. While a more complete attempt at this is made in the following section on fiscal zoning case law, at this point it is noted that *the zoning power is authorized through the police power, and only if fiscal impact considerations are ruled to be a proper activity within the scope of that power will they be accepted by the courts as proper constituents of local policy.*

In several instances, this problem of judicial interpretation is diminished by the specific statutory inclusion of phrases referring to: “the protection of the tax base,” found in the Utah statute (Utah Code Ann. § 17-21-13) authorizing zoning powers for counties; “In the interest of prosperity” in Ohio (Ohio Rev. Code Ann. §§ 713.06 et seq.) and Tennessee (Tenn. Code Ann. § 13-701); and finally, “[to] facilitate economic and adequate provision of [public services]” in the Georgia statutes (Ga. Code Ann. § 69-801). Thus, zoning based on fiscal impact considerations would appear to be authorized in these jurisdictions.

Notwithstanding such general police power authorization, however, an implicit restraint upon the zoning power deals with the assurance of adequate provisions for public facilities. This must also be analyzed in light of its fiscal impact potential. If a fiscal impact analysis showed that without augmentation at extraordinary taxpayer cost existing facilities were inadequate to meet the needs of future development, would this fiscal reason alone be an acceptable basis upon which to base local zoning? Not surprisingly, convincing arguments can be made on both sides of the issue. One might suggest that the inadequacy of public facilities is a valid criterion upon which to base zoning, because if such premature development were allowed it would threaten “the health, safety and general welfare” of the community. Moreover, an important reason for zoning is to promote the efficient and economical provision of public services and this can only be accomplished if development is closely regulated.

On the other hand, others might argue that inadequate public service falls outside the scope of the zoning power. They might argue that zoning must look to the future and that the current absence of such facilities is no justification for depriving someone

of the desired use of his/her land.¹¹ Moreover, such an action would, in fact, penalize an individual property owner for the shortcomings of the entire community. Such criteria would have an exclusionary impact. A locality without adequate public services would often be fiscally justified in excluding housing; it could thereby effectively prevent unwanted growth. Finally, those arguing against this use of zoning would point out that other powers such as safety and health regulations exist and are more directly related to preventing potentially harmful development.

It is evident that substantial questions remain for judicial review and interpretation. Yet, at least on one side of the argument, zoning to ensure adequate public facilities or to protect the tax base is a reasonable interpretation of the intent of police power. If this is true, fiscal impact considerations and fiscal impact analysis, the planning tool to estimate the extent of fiscal disparity, may be required of those who wish to develop according to the desired fiscal posture of the community.

Legislation Defining More Specific Powers

Having examined the origins of the basic zoning power, we now look at legislation defining more specific powers. In the great majority of states, the language used for authorizing a local board of adjustment to grant a variance was again drawn, at least in part, from the Standard State Zoning Enabling Act. Section 7(3) of that model statute lists as a power of the local board:

"To authorize upon appeal in specific cases such variance from the terms of the ordinance as will not be contrary to the public interest, where, owing to special conditions, a literal enforcement would result in unnecessary hardship and so that the spirit of the ordinance shall be observed and substantial justice be done."

A key criterion in granting a variance involves the definition of those exceptions that would be "contrary to the public interest." In addition, the petitioner must be able to demonstrate that the existing ordinance engenders "unnecessary hardship" or "special reasons" and that just relief can be granted within the "spirit of the ordinance."

¹¹ See, e.g., *National Land & Inv. Co. v. Kohn*, 419 Pa. 504 (1965), where the Court states: "Zoning is a means by which a governmental body can plan for the future—it may not be used as a means to deny the future."

Any use of fiscal impact considerations in deciding the fate of a variance must be framed within the scope of the language used in the enabling legislation. The following issues will, in all likelihood, arise:

- (1) Can preservation of the tax rate be included within the meaning of protection of the public interest?
- (2) At what point does a single property owner's pecuniary hardship outweigh any financial gains to an entire community?
- (3) How can the ordinance be changed and still preserve the spirit of the law?
- (4) May a municipality deny an application for a variance on the grounds that it does not have the infrastructure and utilities necessary to serve such development?

Fiscal impact considerations could easily be used to demonstrate significant community economic gain at only minor loss of individual property rights, or, in the reverse case, such economic loss to the community as to be contrary to the public interest. Three states, for example, have chosen a set of criteria upon which to base their variance determinations. California (Gov't Code §§ 65903 et seq. (West)), Kentucky (Ky. Rev. Stat. Ann. § 100.217 (Baldwin)), and Alaska (Alaska Stat. § 29.33) all authorize the granting of a variance in situations where the petitioner would otherwise be deprived of reasonable capacity to use the land in a manner equivalent to that permitted other landowners in the same zone. Fiscal impact analysis could thus effectively be one gauge of "equivalent use."

Also worth noting is the statute in Puerto Rico (P.R. Laws Ann., Tit. 23, § 627).¹² It serves to turn the tables on an application for development which is otherwise in accordance with the zoning ordinance. If special circumstances exist that "make impracticable the application of the regulations . . . due to factors such as economy . . . lack of facilities or public improvements" the project approval may be denied. The potential exists for fiscal impact analysis to be used as a basis to determine what is not practical as authorized by the enabling legislation.

¹² P.R. Laws Ann., Tit. 23, § 627.

Subdivision Controls

In several respects, subdivision controls go hand-in-hand with fiscal impact considerations. Both require that at some point the cost of supplying municipal services to a new development must be determined. To the extent that subdivision controls require a builder to provide specified public services and facilities, the fiscal well-being of that community may be improved. The magnitude as well as the developer/municipal share must still be estimated—the role of fiscal impact considerations in land use policy.

In forty-two of the jurisdictions examined, subdivision controls explicitly include the right to require various public utilities to be provided by the subdivision and dedicated to the city for future use. In most cases, a bond, e.g., Mississippi (Miss. Code Ann. §§ 2890.5, 3374.123), New York (N.Y. Town Law § 216 (McKinney)), North Carolina (N.C. Gen. Stat. § 160A-372), Virginia (Va. Code §§ 15.1-465 et seq.), and Wisconsin (Wis. Stat. Ann. § 12.23 (West)), is required to insure the future provision of these services. In others, e.g., Louisiana (La. Rev. Stat. Ann. § 3:112 (West)), Vermont (Vt. Stat. Ann., Tit. 24, § 411), there is a requirement of a fee in lieu of direct provision of utilities. In several instances, there is a land-dedication requirement for parks, e.g., Hawaii (Hawaii Rev. Stat. Tit. 13, § 6-4), New York (N.Y. Town Law § 76 (McKinney)), South Carolina (S.C. Code § 3-40), or schools, e.g., Illinois (Ill. Ann. Stat., Ch. 24, § 1-12-8 (Smith-Hurd)), Washington (Wash. Rev. Code Ann. § 8.17).

Although the general rule is that undesired and municipally burdensome fiscal impact is not directly stated as the reason behind subdivision controls (because the developer “gains” buildable lots and block and lot property descriptions and is “joined” to the community by submitting to standard division of his property), interesting exceptions to this are found in the Montana and New Hampshire statutes. Section 11-38 of the Montana statute (Mont. Rev. Codes Ann. § 1-38) specifically requires that the “burden on the tax rate of a proposed development in terms of the cost to provide it with municipal services should be weighed against the expected tax revenues to be generated by that development,” (emphasis added)—the very basis of fiscal impact considerations. The New Hampshire statute (N.H. Rev. Stat. Ann. § 6:19) requires that subdivision regulations provide against: “Injury to health, safety or prosperity by reason of the lack of water supply, drainage, transportation, schools, fire department or other public ser-

vices, or necessitate an excessive expenditure of public funds for the supply of such services." (Emphasis added.)

Moreover, under the new Municipal Land Use Law of New Jersey (N.J. Stat. Ann. §§ 40:551-40:554 et seq. (West)), a subdivider may be required to pay his "pro rata share" of the cost of those *off-tract* "street improvements and water, sewerage and drainage facilities, and easements therefor [which have been] necessitated or required by construction or improvements within such subdivision or development." Estimating the pro rata share is certainly within the confines of fiscal impact considerations.¹³ The conditions observed here leave no question as to a very definite role for fiscal impact considerations, and thus the tool fiscal impact analysis, in molding local land use policy. In Montana and New Hampshire, it's an obvious one—an evaluation of cost vs. revenues to provide local services and the resulting impact on the "tax rate" or "prosperity" of the community.

In those states whose subdivision regulations require dedication of land for schools as part of the approval process, the role of fiscal impact analysis, while not as explicit, is nonetheless a potentially powerful one. If a developer can demonstrate significant municipal and school cost-revenue surpluses, can he not be relieved of his land-dedication requirements? In the reverse case, if educational costs so outweigh revenues, is land dedication for schools a sufficient fiscal exaction?

Indeed, fiscal impact considerations are in the very nature of the subdivision process. As all local capital improvements appear in the operating budget of a community as annual debt service, the effect of subdivision development on the municipal fisc is properly a matter for local concern.

Planned Unit Developments

Several states, in recognizing the inflexibility of existing zoning and subdivision regulations, particularly where large scale development is concerned, have recently passed planned unit development (PUD) legislation to facilitate "more efficient use of land."¹⁴ These authorizations, while providing a more comprehensive regulatory

¹³ Colo. Rev. Stat. § 24-67-101; Conn. Gen. Stat. Ann. § 8-13b (West); Idaho Code § 67-651; Kan. Stat. § 12-725; Nev. Rev. Stat. § 280A.010; N.J. Stat. Ann. §§ 40:55-54 et seq.; Pa. Stat. Ann., Tit. 53, § 10711 (Purdon); Vt. Stat., Tit. 24, § 4407.

¹⁴ See also *Divan Bldg. v. Wayne Township*, 66 N.J. 582 (1975).

device than subdivision controls, still tend to concentrate on insuring the adequate provision of public utilities. An example is an Ohio state statute (Ohio Rev. Code Ann. § 19.02.1) which authorizes the use of PUD to promote "greater efficiency in providing public and utility services."

The Idaho statute, however, goes significantly beyond the scope of the other states and, in fact, authorizes a fiscal impact approach. Section 67-6515 of the Idaho statute (Idaho Code § 7-6515) permits PUD applications to be dealt with under the special use permit. Under that procedure, studies may be required of the "social, market, *fiscal* and environmental effects of the proposed special use." (Emphasis added.)

Applying fiscal impact considerations to the approval of planned developments serves a basic purpose to assure a local jurisdiction that a development, very frequently one that is larger than any they have previously experienced, will not be a severe financial strain. Fiscal impact analysis as a modern planning tool has made perhaps its greatest inroad through this particular application to land use control.

Annexation

The final type of land use control examined was the statute permitting municipalities to extend their existing boundaries. In this situation, fiscal impact analysis could be productively used both in estimating the short-run fiscal effect of such an extension as well as its long-term implications.

Not surprisingly, our survey found that for this type of municipal action, fiscal impact considerations were *explicitly* required more often than in the specification of any other *land use regulation*. In most instances, due to the size of the acquisition, the potential for financial error is enormous. Although gross annexation figures are muddled by the inclusion of small boundary changes, between 1970 and 1973 annexations of ten square miles or more occurred in seventeen states. Approximately the same number of states (18) have statutes which make reference to the necessity of evaluating the magnitude and developing a plan for financing the extension of public services to the annexed territory before approval of annexation is granted.¹⁵ This is almost the exact wording of the

¹⁵ Ala. Code, Tit. 27, § 154; Ark. Stat. Ann. § 19-317; Fla. Stat. Ann. § 171.021 (West); Colo. Rev. Stat. § 31-8-102; Ind. Code Ann. § 18-5-10-21 (Burns); Md. Code Ann., Art. 23A § 19; Miss. Code Ann. § 3374-10;

Florida (Fla. Stat. Ann. § 71.021 (West)), Indiana (Ind. Code Ann. § 8-5-10-21 (Burns)), Maryland (Md. Ann. Code, Art. 23 A § 9), Mississippi (Miss. Code Ann. § 374-10), Missouri (Mo. Ann. Stat. § 1.015 (Vernon)), Montana (Mont. Rev. Codes Ann. §§ 1-514 et seq.), Nebraska (Neb. Rev. Stat. § 6-117), Nevada (Nev. Rev. Stat. §§ 68.596 et seq.), New Mexico (N.M. Stat. Ann. §§ 4-7-1 et seq.), North Carolina (N.C. Gen. Stat. § 60-453.3), and North Dakota (N.D. Cent. Code §§ 0-51.1-01 et seq.) statutes.

In several states, the enabling statutes closely control the fiscal solvency of the annexing area at the expense of the annexed area. The intent is to prevent premature annexation for purely selfish local reasons. In Iowa (Iowa Code Ann. 362.7 (West)), a precondition to annexation is a demonstration that the community is capable of extending services to an area and that it is not "annexing territory merely for the purpose of increasing tax revenues." In Michigan (Mich. Stat. Ann. § .2246 (West)) and Minnesota (Minn. Stat. Ann. § 14.01 (West)), preconditions require showing that the increase in taxes in the areas to be annexed bear some relation to the expected benefits which will be received by residents. In Oregon (Ore. Rev. Stat. § 22.111), following the same reasoning, limitations are placed on the maximum tax rate that may be levied on the annexed area relative to the annexing jurisdiction.

The potential role for fiscal impact analysis is thus considerable. In Washington (Wash. Rev. Code Ann. § 5.13), it is perhaps clearest of all. A review board is authorized to determine whether annexation is in the public interest. Its deliberations must include an examination of the immediate and potential revenues that would be derived by the city as a result of annexation, and their relation to the cost of providing service to the area.

Statewide Land Use Plans

Twenty-one states have enacted statewide planning statutes.¹⁶ These authorizations serve primarily to provide for a coordinated statewide development plan emphasizing the economic and efficient provision of public facilities.

Mo. Ann. Stat. § 71.015; Mont. Rev. Codes § 11-514; Neb. Rev. Stat. § 16-117; Nev. Rev. Stat. § 268.596; N.M. Stat. Ann. § 14-7-1; N.C. Gen. Stat. § 160-453.3; N.D. Gen. Stat. §§ 40-51.1-01 et seq.; S.C. Code 5-3-40; Tenn. Code Ann. § 6-310; Va. Code §§ 15.1-1032 et seq.; Wyo Stat. § 15.1-54.

¹⁶ Council of State Governments (COG), *Land: State Alternatives for Planning and Management* 10-11, Fig. 1 (1975).

Our survey shows two basic models of statewide planning; each represents a different level of state involvement. The simplest prototype authorizes state boards to develop plans for the future physical development of the state and to explore how planned statewide public expenditures will be financed. This authorization attempts to expand to the state the same underlying purpose of the local comprehensive plan, that of achieving efficient and orderly development of land. There is, however, *no direct state regulatory power*. An example is the Advisory Comprehensive Planning and Research statute in Alabama (Ala. Code, Tit. 37, § 54) which has as one of its purposes the preparation of "a guide for long-range development of advisory physical plans with respect to the pattern and intensity of land use and the provision of public facilities including transportation facilities with *long-range fiscal plans for such development*." (Emphasis added.)

Other states with similar provisions are Colorado (Colo. Rev. Stat. § 4-65-101), Delaware (Del. Code, Tit. 29, § 101 (Michie)), Georgia (Ga. Code Ann. § 0-290), Nevada (Nev. Rev. Stat. §§ 68.596 et seq.), North Carolina (N.C. Gen. Stat. § 60-453.3), and Pennsylvania (Pa. Stat. Ann., Tit. 53, § 6945 (Purdon)).

The second basic model permits the state to review local plans and exert *direct state control* if local plans are not in harmony with upper level governmental objectives. Frequently, the legislation authorizes a fiscal impact approach to examining proposed growth. In Vermont, the State Land Use and Development Plan (Vt. Stat. Ann., Tit. 10, § 001) establishes district commissions to review development plans. According to the law, they are to take into account whether or not the proposed development will significantly affect "*existing and potential financial capacity to reasonably accommodate both the total growth and the rate of growth otherwise expected for the town and region* which would result from the development if approved." (Emphasis added.) Similar considerations are found in the land use laws of Florida (Fla. Stat. Ann. § 3.00 (West)), Hawaii (Hawaii Rev. Stat., Tit. 38, § 81), Minnesota (Minn. Stat. Ann. § 62.381 (West)), and Oregon (Ore. Rev. Stat. § 53.100).

As state land use laws continue to be passed on an incremental basis, and as the second and more powerful of the two models dominates recent state approvals, fiscal considerations and the tool of fiscal impact analysis will also grow.

The state is, in effect, not only asking local units to be fiscally

responsible in planning for the future, they are also asking that comparative analyses be performed with and without a proposed development or among land use alternatives.

State land use and economic-development plans are on a par with annexations in terms of their explicitness in specification of fiscal considerations as an element of land use planning and derivative zoning.

Summary

Land use regulations generally are based on the broad authorization of local government's use of police power. Despite a lack of specific authorization for fiscal impact considerations, the language of such planning enabling legislation often seems to permit implicitly this type of analytic input. This recurs in the procedures surrounding comprehensive plans, zoning ordinances, variances, subdivision controls, planned unit developments, and annexations. While planning practice will determine under which aegis fiscal impact considerations may best be applied, it is clear that there are numerous areas under which they can be used. The situations for, and exact nature of, these kinds of considerations will, however, come directly from the courts, unless legislatures amend their existing statutes and address the issue directly.

Judicial Response to Fiscal Impact Considerations

Having recognized that a locality's authority to regulate land use derives from the state's delegation of police power by means of enabling legislation, one must now review the judiciary's interpretation and application of these statutes. Only through court action can the nature and extent of this delegated authority be properly understood. Therefore, one must examine existing case law throughout the states to draw reasonable conclusions about the applicability of fiscal impact considerations as a means to plan for and control land use development.

Initially, however, a survey of the case law raises a recurring difficulty. Since the idea of basing land use policy, at least in part, on fiscal considerations is a relatively new planning endeavor, there exists little if any precedent that specifically considers the question at issue. As with much legal hypothesis and review, analogy to related concepts and phraseology is necessary. Consequently, reference may be properly directed to the fact that the

basic tenet at issue, the degree to which a municipality can regulate land use within its borders on the basis of fiscal impact, has been examined within the context of fiscal zoning and exclusionary zoning cases.

Preliminary Results

The most striking conclusion, although it was anticipated, is the predominant absence of judicial decisions addressing the issue of a municipality's ability to control land use solely on the basis of a development's local fiscal impact. Significantly, in at least twenty-two states, the case law on zoning did not address this issue.¹⁷ Although the reasons for this finding vary, depending on the characteristics of the state and its courts, several possible explanations exist:

- (1) Substantial areas in many states are totally without zoning laws, so there is a relatively low volume of land use cases.
- (2) In many states, zoning laws are not strictly enforced.
- (3) Most courts still attach a presumption of validity both to zoning regulations and to the administration of such regulations.
- (4) Fiscal considerations will only stir controversy where growth pressures exist.
- (5) Lower level courts are unsophisticated and thus choose to avoid planning issues.

Implicit in these suggested explanations, however, is the assumption that they inevitably will come before the courts.¹⁸ As zoning laws spread, as government control of individual land-use decisions becomes more pervasive, as growth pressures increase, and

¹⁷ These states were Alaska, Arizona, Delaware, Hawaii, Idaho, Indiana, Iowa, Maine, Montana, New Mexico, North Dakota, Oklahoma, Oregon, South Carolina, South Dakota, Texas, Utah, Vermont, West Virginia, Wisconsin, Wyoming, and the Commonwealth of Puerto Rico.

¹⁸ See, e.g., *Cedar-Riverside Environmental Defense Fund v. Hills*, 422 F. Supp. 294 (D. Minn. 1976), wherein the environmental impact statement for a highrise, high density project was invalidated due, in part, to its failure to analyze governmental revenue increases resulting from this type of development (as opposed to lower density alternatives). See also *Construction Indus. Ass'n v. City of Petaluma*, 552 F.2d 897 (9th Cir. 1975), *cert. denied* 424 U.S. 934 (1976).

finally, as planners and judges become more sophisticated, the issues involved will undoubtedly be closely scrutinized by those who referee the land-development process.

This trend can already be discerned. Out of all decisions addressing basic zoning laws, 40 percent were handed down in only the last five years. Litigation on related issues may also reasonably be expected to increase.

The Setting

In the courts of several states, the issue of fiscal impact as related to zoning has been considered, although even in these jurisdictions there has been only a minimal number of such decisions. Yet, it is from these opinions that insight may be drawn as to the legal applicability of fiscal impact considerations as a basis for municipal land use decisions.

Our survey found that zoning cases give rise to a great variety of legal issues ranging from narrow questions of statutory interpretation to complex matters of due process and equal protection. It also found, however, that questions about fiscal impact considerations were raised primarily in one type of prototypical litigation involving property owners and the municipality.

There are two versions of this litigation. In the first situation, a zoning board's decision to grant a variance in order to permit a more intense land use is challenged by nearby property owners on the basis that the resultant increased density would overburden the existing municipal facilities and, therefore, be harmful to the community's health and general welfare.

The second version is almost a mirror image of the first, but from the municipality's point of view. Here, the property owner challenges a zoning board's decision either to rezone his property for a more restricted use or to deny a variance permitting a higher-density use. In either case, the decision is purportedly based on the lack of adequate municipal services.

Not surprisingly, the courts throughout the country are widely split as to whether the availability of municipal services and its concomitant burdening of the tax base is a valid purpose underlying the zoning power. Of the thirty states where courts have addressed this issue, a wide divergence of opinion has emerged (including intrastate differences). The federal courts, with only a few decisions handed down, apparently affirm the validity of fiscal impact analysis.

Fiscal Impact: A Valid Consideration

The states which permit zoning decisions based on the adequacy of public facilities are: Alabama, Connecticut, Georgia, Kansas, Kentucky, Louisiana, Maryland, Minnesota, Mississippi, Nebraska, New Hampshire, New York, North Carolina, Ohio, Tennessee, and Washington. In the federal courts, this view has also been endorsed. A typical decision is *Steel Hill Development Inc. v. Town of Sanbornton*,¹⁹ in which the court wrote: "We recognize, as within the general welfare, concerns relating to the construction and integration of hundreds of new homes which would . . . pose substantial financial burdens on the town for police, fire, sewer, and road service."

Another argument which the judiciary has accepted stops short of the pronouncement in *Sanbornton* and states merely that the provision of adequate public facilities, particularly with regard to water and sewerage, falls within promoting the "health" component of the zoning power. The courts have tacitly approved the validity of these considerations in their refusal to question the judgment of the local board on these matters.

In an Ohio case, *Willott v. Village of Beachwood*,²⁰ which denied a challenge to the validity of a zoning amendment to permit a shopping center, the court asks:

"[W]here the council of a municipality makes a determination of land use policy which involves the control of traffic, the burden of traffic . . . , the municipal revenue which will be produced for the city, and the land use consistent with the best interests of the general welfare and prosperity and development of the community as a whole, does the court have the authority to invalidate such an ordinance in the absence of a showing that such power has been exercised in such an arbitrary, confiscatory and unreasonable manner as to be in violation of constitutional guarantees?"

Its answer is that "the courts are without authority to interfere."

One of the more recent and most publicized cases which approved the use of zoning based in part on the availability of public services was the New York case of *Golden v. Planning Board of the*

¹⁹ 469 F.2d 956 (1st Cir. 1972).

²⁰ 175 Ohio St. 447 (1964); see also *Hukle v. City of Kansas City*, 512 P.2d 457 (1973).

Town of Ramapo.²¹ The highest court in New York upheld the validity of a zoning ordinance which tied future residential development to the availability of public facilities as determined by an eighteen-year capital budget plan. The court accepted the underlying purpose of the ordinance "to phase residential development to the town's ability to provide the facilities or services." Fiscal-impact considerations were the major items upon which the decision turned. A similar attempt at capital-facilities phasing in Petaluma, Cal., was sustained on appeal, again due to the presence of fiscal impact documentation.

Fiscal Impact: Not a Valid Consideration

Among the states in which there are significant rulings prohibiting the consideration of the adequacy of public facilities or its impact on the tax base are Arkansas, California, Colorado, Florida, Illinois, Massachusetts, Michigan, Missouri, Nevada, Pennsylvania, and Washington, D.C. The courts have accepted two distinct arguments as the logic for invalidating zoning determinations based on these economic considerations. In the first set of holdings, the courts have reasoned that the unavailability of municipal services, while definitely a public concern, should be dealt with by powers other than those of land use regulations. In the Maryland case of *Crowther, Inc. v. Johnson*,²² for example, while upholding a denial of a special permit for a mobile home park, the court stated that "the health threat could not in itself preclude the appellant from acquiring the special permit . . . ; any problem [as to] a health hazard could easily be alleviated and controlled by the Health Department authorities."²³

An equally strong pronouncement limiting use of the zoning power was handed down by the Pennsylvania Supreme Court in the case of *National Land & Investment v. Easttown Township*.²⁴ The

²¹ 324 N.Y.S.2d 178 (1971), *rev'd* 30 N.Y.2d 559 (1972), *cert. denied* 409 U.S. 1003 (1972); *Construction Indus. Ass'n v. City of Petaluma*, note 18 *supra*.

²² 225 Md. 379, 384 (1961).

²³ See also *Sundance Hill Homeowners Ass'n v. Board of Comm'rs*, 188 Col. 321 (1975).

²⁴ 419 Pa. 504, 532 (1966); see *Robinson v. Boulder*, 547 P.2d 228 (Colo. 1976).

court held unconstitutional a four-acre minimum-lot requirement for single-family residential developments. It stated, "A zoning ordinance whose primary purpose is to prevent the entrance of newcomers in order to avoid future burdens, economic and otherwise, upon the administration of public services and facilities cannot be held valid." Hence, in this fashion, the courts have linked the question of fiscal zoning with the complexities inherent in the question of exclusionary land use regulation. The reasoning of *National Land* has surfaced in decisions in several other state courts: Michigan, Nebraska, Rhode Island, Virginia, and Washington, D.C. Control of the rate of growth by withholding public utilities to outlying areas has also been disapproved.

Moreover, in both New Jersey and Rhode Island, a third aspect of this problem has arisen.²⁵ For, although the courts there have indicated that fiscal zoning may not be utilized to stabilize the tax rate (i.e., by overzoning for industry), the question has been left open as to whether a zoning board could properly consider, among other elements, a project's impact on the municipality's ability to provide utilities and services to its present and prospective citizenry. Thus, in these decisions, the applicability of fiscal impact analysis has not been totally foreclosed.

Summary

The review of the case law throughout the states leads unavoidably to the realization that the legal acceptability of land use controls to promote fiscal stability on a national scale is in various stages of acceptance. In many jurisdictions, the issue is novel, never having been considered. Other courts expressly declare such considerations to be appropriate. Some states permit these deliberations to serve as one among several bases for local land use decision making. Several additional jurisdictions would permit fiscal considerations to serve as an element in the decision-making process, but only in determining the weight of evidence regarding the overall reasonableness of a proposal for development. Finally, in several states, including Michigan, New Jersey, and Pennsylvania, fiscal considerations as an input to zoning are frowned upon. Here the issue involves constitutional implications concerning a mu-

²⁵ *Southern Burlington Co. NAACP v. Mount Laurel Township*, 67 N.J. 151 (1975); *Town of Gloucester v. Divio's Mobile Home Court, Inc.* 111 R.I. 120 (1973).

nicipality's power to exclude "newcomers," including low- and moderate-income persons, from its borders.

Essentially, therefore, the answer may ultimately be found in the validity of fiscal impact considerations as a planning endeavor. For if the value of fiscal impact considerations can be demonstrated and their relationship to planning established, then one may anticipate increasingly wider judicial affirmation as a reasonable component of responsible land use control. In any case, there are two fronts on which the issue will be fought, and these are the focus of the previous material. Knowledge of the issues involved in both areas is of vital importance to land use and municipal attorneys and elected officials who are concerned with the complex task of incorporating fiscal responsibility into local land use policy.

THE APA ACT: LAND USE REGULATIONS AND THE REAL PROPERTY TAX†

ANN PURDUE

I. INTRODUCTION

The enactment of New York's Adirondack Park Agency Act¹ (APA Act) and the subsequent adoption of the Adirondack Park Land Use and Development Plan² (Plan) has been recognized as "the most extensive effort by any state to regulate land use in a portion of its jurisdiction by means of regional land use controls."³ The restrictions imposed upon private land use development in the Park, however, raise serious questions as to their potentially adverse impact upon the tax base of Adirondack municipalities and upon the tax burden of individual property owners.

In an attempt to deal with these questions, it is the purpose of this article to consider: (1) the regulatory scheme of the APA Act; (2) land use regulations as a determinant of real property value; (3) the relationship between real property value and taxation; (4) the extent to which the state should attempt to subordinate the interests of municipal government and landowners in the promotion of a state interest in preserving the natural and open space resources of the Park;⁴ and (5) possible amendments to the real property tax law, an object of severe criticism itself in recent years.⁵

† Reprinted by permission of the copyright owner from 63 *Iowa Law Review* 889 (1978).

¹ N.Y. EXEC. LAW art. 27 (McKinney Supp. 1977) (the Adirondack Park Agency Act (APA Act)).

The APA Act was enacted in 1971 providing for the creation of the Adirondack Park Agency. The Agency was charged with responsibility for devising a land use plan and enforcing interim controls.

² N.Y. EXEC. LAW § 805 (McKinney Supp. 1977).

³ Booth, *The APA Act: A Challenge in Land Use Planning*, 43 GEO. WASH. L. REV. 612 (1975) [hereinafter cited as Booth]. See Savage & Sierchio, *The Adirondack Park Agency Act: A Regional Land Use Plan Confronts "The Taking Issue"*, 40 ALB. L. REV. 447, 448 (1976) [hereinafter cited as Savage]; Davis, *Land Use Control and Environmental Protection in the Adirondacks*, 47 N.Y.S.B.J. 189 (1975) [hereinafter cited as Davis]; Note, *Preserving Scenic Areas: The Adirondack Land Use Program*, 84 YALE L.J. 1705 (1975) [hereinafter cited as *Preserving Scenic Areas*].

⁴ See N.Y. EXEC. LAW § 801 (McKinney Supp. 1977); N.Y. ADIRONDACK PARK AGENCY, ADIRONDACK PARK LAND USE AND DEVELOPMENT PLAN AND RECOMMENDATIONS FOR IMPLEMENTATION 2 (1973) [hereinafter cited as DEVELOPMENT PLAN]; Savage, *supra* note 3, at 453; Booth, *supra* note 3, at 617; Memorandum of Nelson A. Rockefeller, Governor of New York, on Approving the Adirondack Park Agency Act, N.Y. EXEC. LAW art. 27, reprinted in 1973 N.Y. LAWS 2342.

⁵ See 2 TEMPORARY N.Y. STATE COMMISSION ON STATE AND LOCAL FINANCES, REPORT OF THE TEMPORARY STATE COMMISSION ON STATE AND LOCAL FINANCES 27 [hereinafter cited as STATE AND LOCAL FINANCES], (it is asserted that the primary disadvantages of the real property tax are regressivity, period price level stagnation, and an apparent lack of revenue elasticity). Indeed, assessment of real property is bereft with inequities. *Id.* at 44.

II. THE APA ACT: THE REGULATORY SCHEME

a) Introduction

Administered by the Adirondack Park Agency under the APA Act, the Plan restricts and channels land use and development of the 3.7 million acres of privately owned lands within the six million acre Adirondack Park⁶ through flexible,⁷ though stringent, comprehensive land use controls. It was intended that the Plan promote the state's interest in the preservation of the open space and natural resources of the Park while accommodating the interest of the private landowner in development.⁸ Reflecting, in varying degrees, the land's capacity to withstand development, existing land use patterns, and the state interest in preservation,⁹ six land use areas are delineated under the Plan.¹⁰ As the development capacity of the land diminishes and the state

⁶ The boundaries of the Adirondack Park are set forth in N.Y. ENVIR. CONSERV. LAW § 9-0101 (McKinney Supp. 1977). The state interest in the Park arises, in part, from the state's extensive land holdings. 1 N.Y. ADIRONDACK PARK AGENCY, COMPREHENSIVE REPORT 7-20 (1976) [hereinafter cited as COMPREHENSIVE REPORT]; Savage, *supra* note 3, at 451. After the creation of the Adirondack Forest Preserve in 1885, the legislature created the Adirondack Park which included both private and public land in 1892. In 1894, the New York Constitution was amended to require that the forest preserve remain "forever wild." N.Y. CONST. art. XIV, § 1 (McKinney 1968). See COMPREHENSIVE REPORT, *supra* note 6, at 5-8.

⁷ The flexibility of the Plan results from the fact that no land use is flatly banned. Booth, *supra* note 3, at 622; Davis, *supra* note 3, at 197. Rather, uses are either compatible and therefore permitted, or incompatible and subject to the review and approval of the Adirondack Park Agency. N.Y. EXEC. LAW § 805(3)(a) (McKinney Supp. 1977). Further, the Act is "administrative in nature, rather than self-enforcing, and the Agency must therefore make many discretionary decisions incorporating a wide variety of factors." Booth, *supra* note 3, at 619. Overall intensity guidelines are approximate. N.Y. EXEC. LAW § 805 (McKinney Supp. 1977). Variances from the Act's shoreline restrictions may be granted to avert undue hardship or practical difficulty to the landowner. N.Y. EXEC. LAW § 806(3) (McKinney Supp. 1977). See Savage, *supra* note 3, at 458-59.

⁸ See N.Y. EXEC. LAW § 801 (McKinney Supp. 1977), which provides in pertinent part: The state of New York has an obligation to insure that contemporary and projected future pressures on the park resources are provided for within a land use control framework which recognizes not only matters of local concern but also those of regional and state concern.

The basic purpose of this article is to insure optimum overall conservation, protection, preservation, development and use of the unique scenic, aesthetic, wildlife, recreational, open space, historic, ecological and natural resources of the Adirondack Park.

See also note 4 *supra*.

⁹ Booth, *supra* note 3, at 616. The state interest is expressed in the development plan: The Land Use and Development Plan is the product of extensive and detailed studies, analysis and evaluation of the physical and biological resources and characteristics of the Adirondack Park, and their capability to withstand development, and of existing land uses and public facilities of the Park, and the public benefits to be derived from the unique natural resources and the scenic, historic, recreational, open space and other qualities of the Park.

DEVELOPMENT PLAN, *supra* note 4, at 1.

¹⁰ These land use areas are defined in N.Y. EXEC. LAW § 805 (McKinney Supp. 1977). Each land use area is intended to promote a varying balance of preservation and development needs. DEVELOPMENT PLAN, *supra* note 4, at 2.

interest in the land becomes more significant, the land use controls within each area become more severe. These controls are implemented primarily through overall intensity guidelines,¹¹ shoreline restrictions,¹² and regional project review,¹³ and are designed to conform with the stated purposes and policies of each land use area.¹⁴ Consideration of the restrictions applicable to each land use area reveals the extent to which permissible uses diverge from profitable uses of private lands in the Park.

b) *Land Use Areas*

The first and least restricted of the six land use areas are hamlet areas which are intended to serve as the growth and service areas of the Park and to absorb most of the Park's housing, commercial, and industrial expansion.¹⁵ They comprise only two percent of the privately owned lands of the Park,¹⁶ and include areas where communities of various sizes have already developed.¹⁷ By encouraging development in hamlet areas in which no overall intensity guidelines¹⁸ and few land use restrictions¹⁹ apply, the Plan purports to discourage "haphazard location and dispersion of intense building development."²⁰

The moderate intensity areas constitute the second land use area classification.²¹ These areas are adjacent to hamlet areas²² and include only three

¹¹ N.Y. EXEC. LAW § 805 (McKinney Supp. 1977). Discussed in the DEVELOPMENT PLAN, as a "basic reference," overall intensity guidelines are stated "in terms of the approximate number of principal buildings per square mile which should not be exceeded within various types of land use areas." DEVELOPMENT PLAN, *supra* note 4, at 2. "Principal building" is defined in N.Y. EXEC. LAW § 802(50) (McKinney Supp. 1977). See also Booth, *supra* note 3, at 622-23; Davis, *supra* note 3, at 220-21.

¹² The statute provides for minimum setback and lot width requirements for shoreline lots and restricts vegetative cutting with the intention of protecting water quality and the visual quality of the shorelines. N.Y. EXEC. LAW § 806 (McKinney Supp. 1977). See COMPREHENSIVE REPORT, *supra* note 7, at 22; DEVELOPMENT PLAN, *supra* note 4, at 7; Booth, *supra* note 3, at 625.

¹³ N.Y. EXEC. LAW §§ 809-810 delineate those projects which are of "regional concern" because of their nature, size, or location and which may not be undertaken without first obtaining a permit from the Agency. Booth, *supra* note 3, at 626-27.

¹⁴ See N.Y. EXEC. LAW § 805 (McKinney Supp. 1977).

¹⁵ See N.Y. EXEC. LAW § 805(3)(c) (McKinney Supp. 1977); Booth, *supra* note 3, at 620-21; Savage, *supra* note 3, at 455-56.

¹⁶ COMPREHENSIVE REPORT, *supra* note 6, at 19.

¹⁷ N.Y. EXEC. LAW § 805(3)(c)(1) (McKinney Supp. 1977).

¹⁸ N.Y. EXEC. LAW § 805(3)(c)(4) (McKinney Supp. 1977).

¹⁹ All land uses are deemed compatible. N.Y. EXEC. LAW § 805(c)(3) (McKinney Supp. 1977). Regional projects subject to Agency review include development involving wetlands, subdivisions of 100 or more lots, structures in excess of 40 feet in height, airports, watershed management and flood control projects, and expansions of 25% or more of any of the above pre-existing uses. N.Y. EXEC. LAW §§ 809, 810(a) (McKinney Supp. 1977).

²⁰ N.Y. EXEC. LAW § 805(3)(c)(2) (McKinney Supp. 1977).

²¹ See N.Y. EXEC. LAW § 805(3)(d) (McKinney Supp. 1977); DEVELOPMENT PLAN, *supra* note 4, at 3; Booth, *supra* note 3, at 621; Savage, *supra* note 3, at 456.

²² N.Y. EXEC. LAW § 805(3)(d) (McKinney Supp. 1977).

percent of the privately owned lands of the Park.²³ Subject to greater restrictions than the hamlet areas, the moderate intensity areas consist of lands capable of withstanding relatively intense development, principally of a residential nature.²⁴ Overall intensity guidelines require approximately 1.3 acres per principal building.²⁵

The third land use area classification is the low intensity area.²⁶ With resources capable of supporting housing development at a lower intensity than hamlet or moderate intensity areas, low intensity areas allow development at levels which protect natural resources and provide for growth as well.²⁷ In these areas, which include eight percent of the Park's private lands,²⁸ overall intensity guidelines require approximately 3.2 acres per principal building.²⁹

The fourth and fifth of the land use area classifications, rural use and resource management areas, are subject to the most restrictive land use controls under the Plan.³⁰ Development in these areas is restricted severely on the basis of "natural resource" and "public policy considerations."³¹ It was intended that these areas "provide the essential open space atmosphere that characterizes the Adirondack Park."³² Comprising thirty-four percent of the Park's privately owned lands,³³ rural use areas are subject to overall intensity guidelines requiring approximately 8.3 acres per principal building.³⁴ Resource management areas constitute fifty-three percent of the Park's private lands³⁵ and are subject to an overall intensity guideline requirement of approximately 42.7 acres per principal building.³⁶

Finally, industrial use areas have been designated as those areas presently used by industry or suitable for such uses.³⁷ No overall intensity guidelines apply to these areas³⁸ which comprise a minimal portion of the Park.³⁹

²³ COMPREHENSIVE REPORT, *supra* note 6, at 19.

²⁴ N.Y. EXEC. LAW § 805(3)(d) (McKinney Supp. 1977).

²⁵ N.Y. EXEC. LAW § 805(3)(d)(3) (McKinney Supp. 1977).

²⁶ N.Y. EXEC. LAW § 805(3)(e) (McKinney Supp. 1977).

²⁷ *Id.*; DEVELOPMENT PLAN, *supra* note 7, at 4; Booth, *supra* note 3, at 621; Savage, *supra* note 3, at 456-57.

²⁸ COMPREHENSIVE REPORT, *supra* note 6, at 19.

²⁹ N.Y. EXEC. LAW § 805(3)(e)(3) (McKinney Supp. 1977).

³⁰ N.Y. EXEC. LAW § 805(3)(f)-(g) (McKinney Supp. 1977).

³¹ *Id.* See DEVELOPMENT PLAN, *supra* note 4, at 5; Booth, *supra* note 3, at 621; Davis, *supra* note 3, at 220; Savage, *supra* note 3, at 457-58.

³² See N.Y. EXEC. LAW § 805(3)(f) (McKinney Supp. 1977).

³³ COMPREHENSIVE REPORT, *supra* note 6, at 19.

³⁴ N.Y. EXEC. LAW § 805(3)(f)(3) (McKinney Supp. 1977).

³⁵ COMPREHENSIVE REPORT, *supra* note 6, at 19.

³⁶ N.Y. EXEC. LAW § 805(3)(g)(3) (McKinney Supp. 1977).

³⁷ N.Y. EXEC. LAW § 805(3)(h) (McKinney Supp. 1977). See DEVELOPMENT PLAN, *supra* note 4, at 6-7; Booth, *supra* note 3, at 621; Savage, *supra* note 3, at 458.

³⁸ N.Y. EXEC. LAW § 805(3)(h)(3) (McKinney Supp. 1977).

³⁹ COMPREHENSIVE REPORT, *supra* note 6, at 19.

c) *Regional Project Review*

In addition to restrictions applicable as a matter of law within each land use area, the Act grants the Adirondack Park Agency discretionary powers to review "regional projects"⁴⁰ in which the state has an interest because of their size, nature, or location.⁴¹ In those land use areas subject to the more severe restrictions such as rural use and resource management areas, the Agency is authorized to review a broader range of projects.⁴² The extensive authority of the Agency to review projects in such areas reflects a greater state interest in the preservation of the Park's open spaces than in the preservation of its more developed areas.⁴³

Before a landowner undertakes a regional project, he must obtain a permit from the Agency.⁴⁴ Pursuant to its statutory mandate, the Agency will not approve or grant a permit for a regional project unless it finds that the project is consistent with the Plan, compatible with the character and objectives of the land use area, consistent with the overall intensity guidelines, and without adverse impact upon the natural, scenic, aesthetic, ecological, wildlife, historic, recreational or open space resources of the Park.⁴⁵ In addition, the Agency must find that the proposed project will not place an undue burden upon the municipality in the provision of public services.⁴⁶ To assure that the project is providently pursued, the Agency may attach conditions to the issuance of the permit.⁴⁷

In sum, the Plan purports to promote the state interest in preserving the character of the Park by channelling development into areas "where resources are more tolerant and existing patterns of development demonstrate the suitability, feasibility, or desirability of varying levels of development, and main-

⁴⁰ N.Y. EXEC. LAW § 809(1) (McKinney Supp. 1977).

⁴¹ See N.Y. EXEC. LAW §§ 809, 810 (McKinney Supp. 1977). See generally DEVELOPMENT PLAN, *supra* note 4, at 15-16; Booth, *supra* note 3, at 626-28; Davis, *supra* note 3, at 221-22.

⁴² N.Y. EXEC. LAW § 810 (McKinney Supp. 1977).

⁴³ According to one commentator, "The difference in the regional projects lists reflects the fact that there is a larger state concern relative to what occurs in the Park's open spaces, the rural use and resource management areas, than there is in the Park's more heavily settled areas." Booth, *supra* note 3, at 627-28. See COMPREHENSIVE REPORT, *supra* note 6, at 20, which states, "By requiring that all project proposals of potential regional impact be subject to Agency review, the APA Act provides an essential safeguard to the open space character and natural resources of the Park."

⁴⁴ Where a local government has adopted an approved local land use plan, the local government has jurisdiction to review Class B projects. See N.Y. EXEC. LAW § 809(2) (McKinney Supp. 1977).

⁴⁵ See N.Y. EXEC. LAW § 809(9)-(10) (McKinney Supp. 1977).

⁴⁶ *Id.*

⁴⁷ The Agency has authority to approve, approve subject to conditions, or disapprove the proposed project. N.Y. EXEC. LAW § 809(3), (9) (McKinney Supp. 1977). In 1976, the Agency reported that only 2% of all projects acted upon had been disapproved and that most of those approved were subject to conditions; 51% of the permits contained conditions to insure conformity with overall intensity guidelines; 20% to govern building sites and setback from roads or waterbodies; 19% to regulate sewage disposal; and 14% to require screening for aesthetic purposes. COMPREHENSIVE REPORT, *supra* note 6, at 31.

taining open space in areas where resources are fragile and development has not yet occurred on a substantial basis."⁴⁸ While the restrictions might be relatively insignificant in hamlet, moderate intensity, and low intensity areas, the more severe restrictions upon the remaining eighty-seven percent of the Park's privately owned lands in resource management and rural use areas⁴⁹ entail a significant restraint on development capacity.⁵⁰

III. THE EFFECT OF THE APA ACT ON REAL PROPERTY VALUE

As in the case of most free market values, the value of real property is a function of supply and demand.⁵¹ Land use controls invariably have some effect on supply and demand, and hence upon real property values.⁵² "[I]n the final analysis people create value,"⁵³ voluntarily buying and selling real property at a given time and place and with full knowledge of all the uses to which the property may be put.⁵⁴ The effect of the APA Act on real property values, be it positive or negative, hinges upon the market reaction to the diminution and reallocation of uses.⁵⁵

Prior to the enactment of the APA Act,⁵⁶ a landowner in the Adirondack Park was subject to few restraints from local land use regulation⁵⁷ and was relatively free to use and develop his property as its topography, location, accessibility, and size permitted.⁵⁸ The imposition of land use classifications

⁴⁸ Booth, *supra* note 3, at 620.

⁴⁹ See N.Y. EXEC. LAW § 805(3)(f)-(g) (McKinney Supp. 1977). The stringent intensity controls in these areas are among the most controversial aspects of the APA Act. Booth, *supra* note 3, at 621.

⁵¹ See RING, *THE VALUATION OF REAL ESTATE* 1-6 (2d ed. 1970) [hereinafter cited as RING].

⁵² 1 R. ANDERSON, *NEW YORK ZONING LAW AND PRACTICE* § 112 (2d ed. 1973); A. STRONG, *PRIVATE PROPERTY AND THE PUBLIC INTEREST* 13 (1975); STATE BOARD OF EQUALIZATION AND ASSESSMENT, *ADIRONDACK PARK REAL PROPERTY TAX BASE STUDY: FINAL REPORT*, 11 (1978) [hereinafter cited as FINAL REPORT]. Some writers assume that only a diminution in value will occur upon the imposition of land use restrictions. See, e.g., McMICHAEL'S *APPRAISING MANUAL* 19 (4th ed. 1951); Horn, *Questions Concerning the Proposed Private Land Use and Development Plan for the Adirondack Park*, 24 SYRACUSE L. REV. 989, 996 (1975) [hereinafter cited as Horn]; Linowes & Delaney, *Downzoning—And How the Landowner May Fight It*, 5 REAL EST. L.J. 311 (1977).

⁵³ RING, *supra* note 51, at 10.

⁵⁴ *Id.* at 9. It is also suggested that "property is an intangible concept, being the right to own or possess wealth and to put it to legal use if one wishes. Property thus is a legal right that expresses the relationship between owners and their possessions." *Id.* at 28.

⁵⁵ See Horn, *supra* note 52, at 996 (author assumes that real property values will be detrimentally affected by the APA Act).

⁵⁶ The interim controls established by the APA Act were replaced shortly thereafter by the controls of the Plan.

⁵⁷ See TEMPORARY N.Y. STUDY COMMISSION ON THE FUTURE OF THE ADIRONDACKS, *THE FUTURE OF THE ADIRONDACK PARK* 27 (1970) [hereinafter cited as FUTURE OF THE ADIRONDACK PARK]. In fact, the lack of local regulation was one of the primary reasons for the enactment of the APA Act.

⁵⁸ R. RATCLIFF, *MODERN REAL ESTATE VALUATION: THEORY & APPLICATION* 101 (1975). See RING, *supra* note 51, at 53 (changes in the environment which affect supply include accessibility, and availability of facilities and other improvements essential to the use of land).

under the Plan has restricted supply according to the legally permissible uses of the property. As a result, a supply of legally developable land is found in the hamlet, moderate intensity, low intensity, and industrial use areas, a total of only thirteen percent of the Park's private lands.⁵⁹ A supply of relatively undevelopable land is found in the rural use and resource management areas, a total of eighty-seven percent of the Park's private lands.⁶⁰ Accordingly, the Plan produces an artificial scarcity of developable land and an abundant supply of undevelopable or open space lands.

The effect of the Plan on real property value cannot be understood in terms of supply alone, but must be considered in conjunction with demand. Items which influence demand include tangible factors such as level of income, density and composition of the population, topography of the land, supply of mortgage funds, costs of ownership, and applicable land use restrictions, and intangible factors such as current tastes and preferences of the purchasers.⁶¹ Changes in income levels, population growth, and mortgage fund availability continue to affect the Park as they do the rest of the State and nation.⁶² However, there are unique⁶³ factors which affect the intensity of demand in the Park. Most notably, these include a purchaser's subjective valuation of the advantages and disadvantages of severely restricted land use and any additional ownership costs incurred as a result of the Plan.

Traditionally, it has been assumed that development rights constitute an "essential component of the value" of real property;⁶⁴ it follows that any infringement upon development rights diminishes the value of the underlying property.⁶⁵ Analysts of recent rural development suggest that an increasing number of purchasers of rural property desire some assurance that adjacent lands will not be put to offensive uses.⁶⁶ Thus, regulation of adjacent land uses

⁵⁹ COMPREHENSIVE REPORT, *supra* note 6, at 19.

⁶⁰ *Id.*

⁶¹ See RING, *supra* note 51, at 53.

⁶² CRAIG, ADIRONDACK ECONOMIC PROFILE: PHASE TWO 12 (1974).

⁶³ The uniqueness of these factors arises from the unprecedented degree of regulation of land use under the APA Act.

⁶⁴ "Development rights are an essential component of the value of the underlying property because they constitute some of the economic uses to which the property may be put." *Fred F. French Inv. Co. v. City of New York*, 39 N.Y.2d 587, 597, 350 N.E.2d 381, 387, 285 N.Y.S.2d 5, 11 (1976). It should be noted that this case dealt with land use regulation in an urban context.

⁶⁵ Cutler, *Legal & Illegal Methods of Controlling Community Growth on the Urban Fringe*, 1961 Wis. L. REV. 370, 380-84 [hereinafter cited as Cutler]. See also note 52 *supra*.

⁶⁶ See GINSBERG, *LOCAL GOVERNMENT IN THE CATSKILL REGION* 32 (1974) [hereinafter cited as GINSBERG], in which the author asserted, as part of the study conducted by the Temporary State Commission to Study the Catskills, that the traditional assumption that new development would increase the tax base had given insufficient consideration to such factors as the cost of public services, the effect on state and local aid, and the impact on other land uses and property values. With respect to regulation in the Adirondacks, the APA has asserted that maintenance of the open space character and natural resources of the Park has had significant impact on sustaining the demand for and thus the value of real property in the Park. COMPREHENSIVE REPORT, *supra* note 6, at 17. See also note 67 *infra*.

may, in fact, place a premium on restricted properties rather than depress their value.⁶⁷

The economy of the Park relies in large part upon forestry, agriculture, mineral extractions, tourism and recreation, all of which require the preservation of the Park's open space and natural resources.⁶⁸ However, whether a purchaser of real property in the Park is willing to pay as much for the attribute of open space as he would for the right to develop is still unclear. Since demand for property in the Park seems to be for seasonal residential use rather than for open space use,⁶⁹ it would appear that land value would be affected unfavorably by restrictions that favor open space use. On the other hand, demand for seasonal residential property actually is based upon the attractions of the open space character of the Park. The effect of the Plan on value will depend upon the willingness of potential purchasers to pay the same price per acre for land with full development rights as for land subject to land use restrictions.

Ownership costs⁷⁰ also affect demand. In addition to the ordinary costs associated with property ownership, the landowner in the Park may have to contend with the costs of applying for a permit to undertake a regional project or for a variance from overall intensity guidelines or shoreline restrictions. The landowner may incur further expenses in the fulfillment of conditions of such a variance or permit. Moreover, any real property tax increases precipitated by a diminishing municipal tax base caused by the Plan must likewise be borne by the owner. To the extent that these costs decrease demand, real

⁶⁷ In *Arverne Bay Constr. Co. v. Thatcher*, 278 N.Y. 222, 228-29, 15 N.E.2d 587, 590 (1938), the court suggested:

In a district otherwise well adopted for residences, a gasoline station or other non-conforming use of property may render neighboring property less desirable for use as a private residence. The development of a district for residential purposes might best serve the interests of the city as a whole, and in the end, might perhaps prove to be the most profitable use of the property in such district.

By analogy, industrial or unplanned development in the Park may depreciate values of adjacent properties, while consistent adherence to a plan might preserve the values of all properties of the area. "A property can most profitably be used for vacation homes only if neighboring properties are maintained in a condition harmonious with vacation home living If a developer or other landowner complains of a 'loss' suffered because his land is worth less regulated than unregulated, he must also ask how much it would be worth were all properties around it unregulated also." *Preserving Scenic Areas*, *supra* note 3, at 1719 n.72. See *Cutler*, *supra* note 65, at 384. With respect to urban planning, one author has noted, "The degree to which good planning is lacking, and the extent to which public or private hazards are permitted to encroach on residential areas, will significantly affect the lifespan of the neighborhood and the duration of economic life throughout which property values are assured freedom from economic obsolescence." *RING*, *supra* note 51, at 71.

⁶⁸ "In spite of seasonal fluctuations, recreation still offers the best chance for economic expansion in the Park. In the long run, the measures proposed by the Commission to maintain the wild forest character of the Park and to channel development along proper lines will enhance the economic well-being of Adirondack residents." *FUTURE OF THE ADIRONDACK PARK*, *supra* note 57, at 68. See *Booth*, *supra* note 3, at 615.

⁶⁹ See *FUTURE OF THE ADIRONDACK PARK*, *supra* note 57, at 27.

⁷⁰ The costs of land ownership include real property taxes, maintenance and operating costs, insurance, and mortgage payments.

property values decrease as well.⁷¹

While the overall effect of the Plan is unknown,⁷² considerable shifts in real property values are expected to reflect the diminution and reallocation of development rights. Even if potential purchasers place a premium on open space, it is likely that values would be higher if land ownership carried with it the right to develop. These changes in real property value will affect the fiscal capacity of Adirondack municipal corporations, the tax liability of landowners, and the outcome of the "taking" issue under the Plan.⁷³

IV. THE APA ACT AND THE REAL PROPERTY TAX

a) *Introduction*

The real property tax represents both a cost to the individual landowner for the benefit of public services offered by the municipal corporation,⁷⁴ and a major source of revenue upon which the municipal government depends to finance those services.⁷⁵ In theory, at least, the real property tax bears a direct

⁷¹ See RING, *supra* note 51, at 30.

⁷² With the enactment of the APA Act in 1973, the legislature directed the New York State Board of Equalization and Assessment to conduct a study of various aspects of the real property tax in the Adirondacks and the effect of state land use controls on market values of private lands in the Park. See 1973 N.Y. Laws, ch. 348, § 11 (McKinney). The deadline for a final report was extended from Jan. 1, 1976 to Jan. 1, 1978. After 1975 no further appropriations were made for the study. In April 1978, the State Board of Equalization and Assessment did submit a final report, but by its own admission, it did not fulfill the purpose of the statutory requirements. It concluded that the data collected during the fiscal years of 1973-74 and 1975-76, when the state appropriated \$350,000 for the study, was inconclusive. See FINAL REPORT, *supra* note 52, at 1-3.

⁷³ See notes 128-75 and accompanying text *infra*.

⁷⁴ Municipal corporations are public corporations "created for political purposes and endowed with political powers to be exercised for the public good in the administration of local civil government." C. RHYNE, MUNICIPAL LAW § 1-2 (1957). "The terms 'city,' 'town,' and 'village' denote grades or types of municipalities but acquire no precise meaning in law, except as each is given definition in the varying state constitutions and laws." *Id.* § 1-3. Counties, school districts, fire districts, water districts, and sewer districts come within the definition of "quasi-municipal corporations." *Id.* § 1-4. For the purpose of this article municipal corporations include all of the above political entities as each relies to some extent upon real property taxes to finance its activities.

⁷⁵ "The salient fact is that the real property tax is the essential component of local government financing and that it is intended to reflect a crude cost-benefit relationship between the property and the services provided to the property by the municipality." STATE AND LOCAL FINANCES, *supra* note 5, at 16. It is estimated that real property taxes provide 33% of local revenues in the State. *Id.* at 17. See CAREY, EDUCATIONAL FINANCE AND THE NEW YORK REAL PROPERTY TAX 1-3 (1976) [hereinafter cited as CAREY]; R. KRATOVIL, REAL ESTATE LAW § 483 (2d ed. 1952) [hereinafter cited as KRATOVIL]. The real property tax is "the single most important total revenue source for local governments and the school districts of the state; additionally, it is generally an essential element in State financial planning for the distribution of State aid to local governments and school districts." CAREY, *supra*, at 3.

Aside from generating a significant portion of local revenues, the real property tax provides a stable revenue source through simple and efficient administration. Imposed by the municipal corporation the tax rate may be adjusted precisely to meet local needs. See *id.* at 4-5; STATE & LOCAL FINANCE, *supra* note 5, at 25-26.

relationship to real property values. Accordingly, any change in real property values resulting from the Plan will affect the individual's cost of owning real property and the municipal corporation's capacity to raise revenues.

A municipal corporation has no inherent power of taxation, but only such power as has been delegated to it by constitution or statute.⁷⁶ Subject to several state constitutional limitations,⁷⁷ the New York Real Property Tax Law⁷⁸ empowers a municipal corporation to levy a tax upon all non-exempt real property.⁷⁹ Assessment for the purposes of taxation must be made at full value⁸⁰ and must be uniform to assure an equitable distribution of the tax burden.⁸¹ Of course, in applying the real property tax, both the state and the municipal corporation must comply with the due process⁸² and equal protection⁸³ clauses of the federal and state constitutions. Thus, a landowner has an opportunity to contest the accuracy of the assessment of his property,⁸⁴ and to object to the creation of classifications which bear no reasonable relation to a valid government purpose.⁸⁵

⁷⁶ 16 E. MCQUILLIN, *MUNICIPAL CORPORATIONS* § 44.05 (rev. 3d ed. 1972) [hereinafter cited as MCQUILLIN]. See also RHYNE, *supra* note 74, § 28-1. Without the power to tax, a municipal corporation cannot exist. MCQUILLIN, *supra*, § 44.02; RHYNE, *supra* note 74, § 28-1.

⁷⁷ E.g., N.Y. CONST. art. VIII. See notes 105-09 and accompanying text *infra*.

⁷⁸ N.Y. REAL PROP. TAX LAW §§ 900, 1306, 1420 (McKinney 1972).

⁷⁹ N.Y. REAL PROP. TAX LAW § 102(12) (McKinney 1972) provides that the term "real property" includes land, buildings, structures affixed to the land, railroads, pipes, trailers, and others.

⁸⁰ N.Y. REAL PROP. TAX LAW § 306 (McKinney Supp. 1977). See *Hellerstein v. Assessor of the Town of Islip*, 37 N.Y.2d 1, 332 N.E.2d 279, 371 N.Y.S.2d 388 (1975) (despite the common practice of assessing property at a fraction of full value, the statutory mandate of N.Y. REAL PROP. TAX LAW § 306 should be literally construed). It is anticipated that with the implementation of full value assessment as required by *Hellerstein* residential property, vacant lands, and farm lands will experience an increase in tax liability and commercial, utility, industrial, and apartment properties will experience a decrease. See CAREY, *supra* note 75, at 14-15.

⁸¹ Uniformity of assessment requires that "tracts of substantially equal value will pay substantially the same amount of taxes." KRATOVIL, *supra* note 75, § 490. "Equality in taxation depends upon uniformity of assessment." RHYNE, *supra* note 74, § 28-8. "In order to produce equality in the tax burden there must be uniformity in the manner of assessment." MCQUILLIN, *supra* note 76, § 44.19. See Comment, *Real Property Tax Assessment: A Look at Its Administration, Practices and Procedures*, 38 ALB. L. REV. 498 (1974).

⁸² Procedural due process requires that the landowner be given reasonable notice and opportunity to contest the assessment of his property. MCQUILLIN, *supra* note 76, § 44.17a.

⁸³ Equal protection requires that a classification bear a reasonable relation to a valid government purpose. *Walters v. City of St. Louis*, 347 U.S. 231 (1954). Legislatures may nevertheless resort to the use of classifications in exercising the power to tax. *Steuben Restaurants, Inc. v. City of New York*, 202 Misc. 22, 24, 114 N.Y.S.2d 753, 755-56 (Sup. Ct. N.Y. County 1952). In addition, assessors often implement de facto classifications of property according to use (e.g., residential, commercial, utility). STATE AND LOCAL FINANCES, *supra* note 5, at 56. Residential property has typically been underassessed, while commercial and vacant properties have been overassessed. *Id.* at 47.

⁸⁴ Pursuant to N.Y. REAL PROP. TAX LAW § 512 (McKinney Supp. 1977), an aggrieved landowner may bring a complaint before the board of assessors if the assessment complained of is illegal, erroneous, or unequal. Should the board choose to sustain the assessment, the landowner may then resort to the court under N.Y. REAL PROP. TAX LAW art. 7 (McKinney 1972 & Supp. 1977).

⁸⁵ See note 83 *supra*.

Assessment involves the listing and valuation of real property for the purpose of levying a tax upon it, thereby providing the nexus between real property values and taxation.⁸⁶ Although some provision is made for assessment procedure,⁸⁷ the Real Property Tax Law offers no guidance to the assessor as to the method of valuation to be used.⁸⁸ Subject only to the requirement that real property be assessed at full value, the assessor may determine the value of a parcel by considering: (1) the market value; (2) the capitalization of income;⁸⁹ or (3) the cost less depreciation of the real property.⁹⁰ Assessors typically use the market value approach. If the assessor applies this approach in the manner recommended by the State Board of Equalization and Assessment,⁹¹ he considers the particular market characteristics of the subject property such as location, surroundings, zoning, traffic, improvements, services, and lot features.⁹² The assessment of the value of buildings and fixtures requires consideration of their nature, use, and general condition.⁹³ The assessor then finds comparable properties, rates them as more or less valuable than the subject property, and considers their market value as reflected by a recent sale to estimate the market value of the subject property.⁹⁴ However methodical his valuation, in the final analysis, the assessment depends in large part upon the individual judgment and discretion of the assessor.⁹⁵

⁸⁶ See N.Y. REAL PROP. TAX LAW § 102(2) (McKinney 1972), which defines "assessment" as "a determination made by assessors of (1) the valuation of real property, including the valuation of exempt real property and (2) whether or not the real property is subject to taxation or special ad valorem levies." See also KRATOVIL, *supra* note 75, § 489. The procedure for assessment is set forth in N.Y. REAL PROP. TAX LAW art. 5. (McKinney 1972 & Supp. 1977).

⁸⁷ N.Y. REAL PROP. TAX LAW art. 5 (McKinney 1972 & Supp. 1977).

⁸⁸ N.Y. REAL PROP. TAX LAW art. 5 deals principally with the form and preparation of the assessment rolls, notice requirements, and hearing of complaints by the board of assessors. *Id.*

⁸⁹ Under the "capitalization of income" method, the assessor considers the economic return of the property, *i.e.*, rent of an apartment, sales of a store. It is applied most appropriately to commercial property.

⁹⁰ See generally *Parklin Operating Corp. v. Miller*, 287 N.Y. 126, 129, 38 N.E.2d 465, 466 (1941) where the court stated, "The statutory test of the full value of property is the price at which the property would sell under ordinary circumstances." However, in the event that market value is not readily ascertainable, other available methods of assessment include a capitalization of income from the property, or a computation of cost less depreciation. See also STATE AND LOCAL FINANCES, *supra* note 5, at 20; STATE BOARD OF EQUALIZATION AND ASSESSMENT, THE MARKET VALUE APPROACH TO PROPERTY APPRAISAL 1-9 (1970) [hereinafter cited as THE MARKET VALUE APPROACH]; KRATOVIL, *supra* note 75, § 489; FINAL REPORT, *supra* note 52, at 11. The assessor may choose to use more than one of the accepted methods in his assessment of a particular property. For example, the assessment of commercial property at cost less depreciation may be further adjusted upon consideration of the income obtained from the property. *New York Central R.R. Co. v. Griffin*, 174 Misc. 28, 19 N.Y.S.2d 914 (Sup. Ct. Monroe County 1939); *New York Central R.R. Co. v. Thompson*, 156 Misc. 536, 282 N.Y.S. 269 (Sup. Ct. N.Y. County 1935); *Colgate Inn, Inc. v. Assessors of the Town of Hamilton*, 132 Misc. 506, 230 N.Y.S. 134 (Sup. Ct. Madison County 1928).

⁹¹ See THE MARKET VALUE APPROACH, *supra* note 90, which is distributed to local assessors by the State Board of Equalization and Assessment.

⁹² *Id.* at A-5. See also STATE AND LOCAL FINANCES, *supra* note 5, at 19-20.

⁹³ THE MARKET VALUE APPROACH, *supra* note 90, at A-6.

⁹⁴ *Id.* at 6-19.

⁹⁵ *Id.* at 6-17. "The valuation of property in making an assessment is a quasi-judicial act,

The full impact of the Plan will remain unknown until (1) a sufficient number of sales has been made, thereby indicating the response of the market to the restrictions, (2) assessments are updated to reflect those restrictions, and (3) reductions are made by the Board of Assessors upon specific grievances by landowners. However, some assessors within the Park have come to their own conclusions. One assessor believes that although the Plan has resulted in an increase in valuation of real property in the hamlet and moderate intensity areas, the valuation of real property in rural use and resource management areas has remained constant and in a sense has resulted in a decrease in valuation.⁹⁶ Another believes that the Plan has caused increases as well as decreases in property values within rural use and resource management areas.⁹⁷ Both noted, however, that the Plan's restrictions upon the number of developable lots and thus upon the growth in the number of principal buildings subject to taxation, subsequently freezes to some extent the tax base of the municipalities located in the Park.⁹⁸

b) *The Effect of the APA Act on Municipal Financing: A Proposed Solution*

The effect of land use and development upon municipal financing is two-fold; while development may expand the municipal tax base, it may, at the same time, increase the demand for municipal services. Depending upon the type, location, design, and maintenance of development undertaken, its net effect on municipal financing may be positive or negative.⁹⁹ Accordingly, the Plan will affect the municipal tax base¹⁰⁰ and municipal costs because of its effect on land use development.

With respect to the first consequence of development, the overall effect upon the tax base of a particular municipal corporation will depend upon the

requiring the exercise of judgment and discretion by the assessor." McQUILLIN, *supra* note 76, at § 44.109b. Many commentators assert that the assessors' abuse of their discretion in assessment weakens the efficiency and equity of the real property tax. See CAREY, *supra* note 75, at 5, 8-10; STATE AND LOCAL FINANCES, *supra* note 5, at 22-24.

⁹⁶ Telephone conversation with James J. Spring, Chm. of the Bd. of Assessors of Essex (Nov. 18, 1977). Essex is essentially a farming town, with a large portion of the farmland within the resource management category. The farmland is presently assessed at \$22 per acre; hamlet and moderate intensity areas at \$300 and \$150 per acre, respectively.

⁹⁷ Telephone conversation with Bernard J. LeBlanc, Chm. of the Bd. of Assessors of Long Lake (Nov. 18, 1977). Lands in Long Lake are principally owned by the state and private forestry industries.

⁹⁸ See notes 96, 97 *supra*.

⁹⁹ See Ginsberg, *supra* note 66, at 86.

¹⁰⁰ The Temporary Study Commission on the Future of the Adirondacks, and the Adirondack Park Agency have acknowledged the necessity of monitoring changes in real property values and the importance of sustaining the municipal tax base. See DEVELOPMENT PLAN, *supra* note 4, at 29-30; FUTURE OF THE ADIRONDACK PARK, *supra* note 68, at 83. See also Booth, *supra* note 3, at 632, "One of the most important questions raised by the Act is how its provisions will affect real property taxes in the municipalities and school districts in the Park."

distribution of taxable property among the various land use areas. Assuming that the land use areas within each municipal corporation are in the same proportions as within the Park as a whole, thirty-nine percent of the land will be owned by the state, one percent will be in hamlet areas, two percent in moderate intensity, five percent in low intensity, twenty-one percent in rural use, and thirty-two percent in resource management.¹⁰¹ The New York Real Property Tax Law authorizes the taxation of state forest preserve lands by municipal corporations.¹⁰² Comparable to resource management areas, the state forest preserve should bring to bear similar consequences for the municipal tax base. Open space, as maintained in rural use areas, resource management areas and the state forest preserve typically has been assessed at low values.¹⁰³ It is safe to assume that such low valuation will continue, or perhaps even decline where purchasers place a diminishing value on each additional area of open space. However, lands in the hamlet, moderate intensity and low intensity areas may increase in value as result of their relative scarcity and greater development capacity under the Plan. To the extent that the decreases exceed the increases in real property values, the Plan erodes the tax base, necessitating an increase in the tax rate to sustain a constant level of expenditures.¹⁰⁴ Moreover, the Plan ultimately imposes a constraint upon development and hence upon the expansion of the tax base.

Where the Plan decreases the assessed valuation of real property and thus decreases the tax base, a municipal corporation is brought closer to exceeding the constitutional limitations upon its ability to contract indebtedness¹⁰⁵ and to raise revenues through the taxation of real property.¹⁰⁶ The New York Constitution provides that no county, city, town, village, or school district shall be allowed to contract indebtedness, for any purpose and in any manner, in excess of the amount equal to a prescribed percentage of the average full valuation of real property within its boundaries.¹⁰⁷ It further provides that the amount to be raised by the real property tax shall not exceed a prescribed percentage of the full valuation of property less that amount raised for the

¹⁰¹ For statistics from which these percentages were derived, see COMPREHENSIVE REPORT, *supra* note 6, at 19.

¹⁰² N.Y. REAL PROP. TAX LAW § 532(a) (McKinney 1972).

¹⁰³ See DEVELOPMENT PLAN, *supra* note 4, at 29.

¹⁰⁴ Cf. STATE & LOCAL FINANCES, *supra* note 5, at 136-37 (The effect of tax exemptions on the tax base is discussed. Such tax exemption would have an effect analogous to decreases in real property values resulting from land use regulations).

¹⁰⁵ See generally *McGabe v. Gross*, 274 N.Y. 39, 46, 8 N.E.2d 269, 271-72 (1937) where the court stated, "The mischief to be prevented [by the constitutional debt limitations] was the creation of an excessive debt, the carrying charges of which would fall upon current revenues and the principal upon posterity." and *People v. Cook*, 18 N.Y.S.2d 965, 968 (Sup. Ct. Nassau County 1940), where the court condemned over-assessment of real property as a means of evading the debt limitations, stating, "The purpose of the foregoing constitutional mandate is to place a limitation on city borrowing and extravagance."

¹⁰⁶ The constitutional tax limit imposes a real constraint upon the revenue generating capacity of a municipal corporation. *Hurd v. City of Buffalo*, 34 N.Y.2d 628, 311 N.E.2d 504, 355 N.Y.S.2d 369 (1974).

¹⁰⁷ N.Y. CONST. art. VIII, § 4. See also N.Y. CONST. art. VIII, § 5 (excludes certain types of indebtedness from the computation of the limitation).

payment of interest or redemption of certain indebtedness.¹⁰⁸ Read in conjunction with constitutional and statutory requirements that assessments of real property be at "full value,"¹⁰⁹ these provisions impose quantifiable limitations upon the fiscal capacity of the municipal corporation as a function of the average full valuation of the real property within its boundaries.

Development, however, not only serves to expand the tax base, but also places additional demands upon the municipal corporation to provide public services.¹¹⁰ For example, a new and substantial residential development may demand the extension of the public water and sewerage systems, place a greater number of students in the public school system, and require the services of the local fire and transportation departments. The second consequence of development, then, is the cost of meeting these demands. To the extent that the added local cost outweighs the tax revenues generated by development, the municipal corporation suffers from development.

Municipal corporations usually benefit from the creation within its taxing jurisdiction of commercial and industrial uses that add to the tax base but demand few public services.¹¹¹ Likewise, where the state has surrendered its tax-exempt status, state owned lands add to the tax base and demand no public services.¹¹² Seasonal residences are generally an attractive addition to the tax base as they require few public services unless they subsequently become permanent residences.¹¹³ To the extent that the Plan discourages the above uses and encourages uses with greater demands for public services, the municipal corporation is detrimentally affected.

Thus, it is apparent that the Act has potentially two concurrent effects on real property taxes: (1) a redistribution of the tax burden among landowners reflecting the changes in value among the various land use areas; and (2) within constitutional limitations, an across-the-board increase in the tax levied per dollar of assessed value. While the redistribution effect is an unavoidable consequence of proper assessment practices, the increase in the tax rate represents the landowner's disproportionate share of the burden of promoting the state interest in the preservation of the Park.¹¹⁴

¹⁰⁸ N.Y. CONST. art. VIII, § 10.

¹⁰⁹ N.Y. REAL PROP. TAX LAW § 306 (McKinney 1972).

¹¹⁰ See GINSBERG, *supra* note 66, at 32.

¹¹¹ *Id.* at 61.

¹¹² See *id.* at 43. See also D. VROOMAN, LAND VALUES IN THE ADIRONDACK PARK 30 (1976). Through multiple regression analysis, the author determined that state owned lands generate external benefits reflected in higher prices for adjacent private lands.

¹¹³ See GINSBERG, *supra* note 66, at 53, where it is suggested that seasonal residences might become dependent upon municipal services thereby increasing costs and offsetting any benefits the municipal corporation derived from an expanded tax base. *See* also D. BOWMAN, THE ECONOMIC IMPACT ON A RURAL AREA (1967), where a study of the Tug Hill Region determined that the possibility of this happening was not significant. In the Adirondacks, most developers are required by the Public Health Law to provide water and sewage systems thereby minimizing the fiscal impact upon the municipal corporation. See N.Y. PUB. HEALTH LAW, §§ 1115-1120 (McKinney Supp. 1977).

¹¹⁴ See Horn, *supra* note 52, at 1004.

In order to relieve the local taxpayer of an inequitable share of the public burden and to maintain the fiscal capacity of municipal corporations, state subvention, a direct subsidy by the state to the municipal corporation for lost tax revenues, may be desirable. The practice of state subvention is not entirely new. Most notably, the Agricultural Districts Law¹¹⁵ provides for payment by the state of one half of the taxes lost to the municipal corporation as a result of the partial tax exemption granted agricultural lands participating in *state-created* agricultural districts.¹¹⁶ It should be noted, however, that presently there are no such districts. In addition, the state has provided for state aid in the amount of fifty percent of the local tax loss attributable to the partial real property tax exemption granted to railroads.¹¹⁷

In contrast, the Fisher Act¹¹⁸ and the Forest Districts Law¹¹⁹ provide for a partial tax exemption to landowners of eligible tracts of forest land to encourage the growth and maintenance of the forestry industry as a valuable economic and environmental asset to the state. The absence of a provision for state subvention for the loss of tax revenues to municipal governments has been criticized for shifting an inequitable share of the tax burden to small landowners.¹²⁰

Unlike state subvention, but evincing a policy of minimizing the adverse impact of the state's activities upon municipal finances, the state has at

¹¹⁵ N.Y. AGRIC. & MKTS. LAW art. 25-AA (McKinney 1972) was designed to conserve and protect viable agricultural lands. Qualified landowners are not required to pay real property taxes in excess of the agricultural value ceiling on lands utilized for agricultural production. Upon voluntary conversion of the land to another use, a rollback tax is levied upon the landowner in an amount equal to the tax benefit received in the five preceding years.

¹¹⁶ See N.Y. AGRIC. & MKTS. LAW § 305(f) (McKinney 1972). It should be noted that the municipal corporation obtains no state assistance with respect to the tax loss resulting from the creation of agricultural districts upon the landowners' initiative.

¹¹⁷ See N.Y. STATE FIN. LAW § 54-b (McKinney Supp. 1977); STATE & LOCAL FINANCES, *supra* note 5, at 140-42.

¹¹⁸ N.Y. REAL PROP. TAX LAW § 480 (McKinney 1972).

¹¹⁹ N.Y. REAL PROP. TAX LAW § 480-a (McKinney Supp. 1977).

¹²⁰ See memorandum to Governor Hugh L. Carey from the State Board of Equalization and Assessment (May 20, 1977), in which the Board criticized the Forest Districts Law:

Any exemption from payment of real property taxes, whether partial or total, granted to a non-governmental property owner is a form of government subsidy. It relieves the landowner of part of the costs of owning the property and has an effect similar to a direct payment by the government to the owner. The cost of this subsidy is carried by the remaining nonexempt property owners in a municipality through the higher tax rate required to raise a constant amount of revenues necessary for the performance of municipal functions. The exemption of a parcel of property has the effect of increasing the tax on nonexempt parcels (i.e. property owners).

The underlying policy of real property tax exemptions to non-governmental entities must be the benefit derived by the community in which the exempt property is located. The local nature of the real property tax system requires that the locality granting the exemption should receive a benefit. However, . . . the evidence on 480-a does not indicate that the localities receive such benefits in terms of increased economic activity or more open space for public use.

Id. at 5. See also *Tax Shift to Small Landowners Assailed*, Lake Placid News, May 10, 1977, at 11-12. The same criticism would, of course, apply to the Fisher Act.

times surrendered its typically tax exempt status¹²¹ to maintain the municipal tax base.¹²² Most importantly, in the Park, the state pays real property taxes on lands acquired by the state for the state forest preserve.¹²³

In situations in which the real property tax base has been eroded as a result of the promotion by the state of its own interest, the state typically has attempted to avoid the imposition of an inequitable share of the tax burden upon local governments and landowners. Should the Plan prove to diminish the average full valuation of real property in the Park, a program of state subvention would be advisable.

IV. THE APA ACT AND THE INDIVIDUAL LANDOWNER: COMPENSATION WITH ZONING

In addition to the eventual reduction in the assessment of an individual's property and provision for state subvention to minimize any tax rate increase necessitated by the Plan, the state may provide a subsidy to private landowners in the Park through further adjustments in the real property tax. Such a subsidy may well achieve more effective and equitable land use regulation in the Park. A subsidy may weaken claims of taking under the Act and ease enforcement of its provisions by gaining the cooperation of Park residents.

Both the New York¹²⁴ and United States Constitutions¹²⁵ prohibit the taking of private property for a public use without just compensation. These provisions serve as a limitation upon the government in the exercise of its power of eminent domain and its police power.¹²⁶ While the power of eminent domain authorizes the appropriation by the government of an individual's interest in his property for a public use in exchange for just compensation,¹²⁷ the police power authorizes a restriction of the individual's use of his property but requires no compensation.¹²⁸ It generally has been held that the individual will be required at times to sacrifice his own interests for the public benefit.¹²⁹ Although recognized as the "least limitable" of powers,¹³⁰ the police power

¹²¹ See N.Y. REAL PROP. TAX LAW § 404 (McKinney 1972).

¹²² See STATE AND LOCAL FINANCES, *supra* note 5, at 100-07.

¹²³ N.Y. REAL PROP. TAX LAW § 532 (McKinney 1972), provides that the state shall pay taxes on such lands as if the lands were privately owned.

¹²⁴ N.Y. CONST. art. I, § 7(a).

¹²⁵ U.S. CONST. amend. V.

¹²⁶ See 1 P. NICHOLS, THE LAW OF EMINENT DOMAIN § 1.3 (rev. 3d. ed. 1978) [hereinafter cited as NICHOLS].

¹²⁷ See NICHOLS, *supra* note 126, at §§ 1.11, 1.42.

¹²⁸ For a discussion of the police power and eminent domain powers generally, and their shortcomings, see Costonis, note 143 *infra*. For a discussion of the "taking" issue in the Adirondack Park, see Savage, *supra* note 3. See also 1 R. ANDERSON, NEW YORK ZONING LAW AND PRACTICE §§ 2.01-.18 (2d ed. 1973).

¹²⁹ See *Pennsylvania Coal Co. v. Mahon*, 260 U.S. 393 (1922). "Government could hardly go on if to some extent values incident to property could not be diminished without paying for every such change in general law . . . some values are enjoyed under an implied limitation and must yield to the police power." *Id.* at 413.

¹³⁰ See *Queenside Hills Realty Co. Inc. v. Saxl*, 328 U.S. 80 (1946), where the Court stated,

must be exercised reasonably; an exercise of the police power is invalid if it bears no substantial relation to a legitimate government purpose, is arbitrary, or frustrates all reasonable uses of the property.¹³¹ The difference between a valid exercise of the police power and an unconstitutional "taking" is a matter of degree, determined somewhat by the changing circumstances of a complex society.¹³² Although a mere reduction in value¹³³ or a loss of the most beneficial use¹³⁴ of an individual's property will not render the regulation invalid, a significant diminution in value¹³⁵ or a prohibition against all reasonable use for which a property is adapted¹³⁶ has been held to constitute an

"The police power is one of the least limitable of government powers, and in its operation often cuts down property rights." *Id.* at 83.

¹³¹ See *Lawton v. Steele*, 152 U.S. 133 (1894). "To justify the State in thus interposing its authority in behalf of the public, it must appear, first, that the interests of the public . . . require such interference; and, second, that the means are reasonably necessary for the accomplishment of the purpose, and not unduly oppressive upon individuals." *Id.* at 137. See also *Fred F. French Inv. Co. v. City of New York*, 39 N.Y.2d 587, 591, 350 N.E.2d 381, 383, 385 N.Y.S.2d 5, 7 (1976).

¹³² See *Goldblatt v. Town of Hempstead*, 369 U.S. 590 (1962). There is "no set formula to determine where regulation ends and taking begins." *Id.* at 594; *Euclid v. Ambler*, 272 U.S. 365 (1926). "The line which in this field separates the legitimate from the illegitimate assumption of power is not capable of precise delineation. It varies with the circumstances and conditions." *Id.* at 387.

¹³³ See *Danforth v. United States*, 308 U.S. 271 (1939). "A reduction or increase in the value of property may occur by reason of legislation for or the beginning or completion of a project. Such changes in value are incidents of ownership. They cannot be considered as a 'taking' in the constitutional sense." *Id.* at 285. See also *Fred F. French Inv. Co. v. City of New York*, 39 N.Y.2d 587, 591, 350 N.E.2d 381, 383, 385 N.Y.S.2d 5, 7 (1976); *Salamar Builders Corp. v. Tuttle*, 29 N.Y.2d 221, 225, 275 N.E.2d 585, 589, 325 N.Y.S.2d 833, 836 (1971); *Levitt v. Village of Sands Point*, 6 N.Y.2d 269, 273, 160 N.E.2d 501, 505, 189 N.Y.S.2d 212, 216 (1959); *Wulfschm v. Burden*, 241 N.Y. 288, 150 N.E. 120 (1925).

¹³⁴ See *Goldblatt v. Hempstead*, 369 U.S. 590, 592 (1963), "If the ordinance is otherwise a valid exercise of the town's police powers, the fact that it deprives the property of its most beneficial use does not render it unconstitutional." *United States v. Central Eureka Mining Co.*, 357 U.S. 155, 168 (1958).

¹³⁵ See *Fred F. French Inv. Co. v. City of New York*, 39 N.Y.2d 587, 591, 350 N.E.2d 381, 383, 385 N.Y.S.2d 5, 7 (1976): "The State may not, under the guise of regulation by zoning, deprive the owner of the reasonable income productive or other private use of his property and thus destroy all but a bare residue of its economic value"; *City of Buffalo v. J.W. Clement Co.*, 28 N.Y.2d 241 269 N.E.2d 895, 321 N.Y.S.2d 345 (1971): "whenever a law deprives the owner of the beneficial use and free enjoyment of his property, or imposes restraints upon such use and enjoyment that materially affect its value, it deprives him of his property within the meaning of the Constitution." See also *Pennsylvania Coal Co. v. Mahon*, 260 U.S. 393, 413 (1922); *Grimpel v. Cohalen*, 41 N.Y.2d 431, 361 N.E.2d 1022, 393 N.Y.S.2d 373 (1977); *Gardener v. Leboet*, 24 Misc.2d 511, 204 N.Y.S.2d 468 (Sup. Ct. Nassau County 1960).

¹³⁶ See *Eaton v. Sweeney*, 257 N.Y. 176, 183 177 N.E. 412, 414 (1931): "when, however, the adjustment (in zoning) becomes so one-sided as to be unreasonable and arbitrary, unnecessary to the preservation of the scheme and purpose as a whole, approaching the point where an owner is deprived of any beneficial or profitable use of his property, then the court should step in and afford relief"; *Dowsey v. Village of Kensington*, 257 N.Y. 221, 177 N.E. 427 (1931), where the court held that an ordinance is unreasonable if it restricts the property to a use for which the property is not reasonably adapted, and thereby destroys a greater part of its value. For later cases following these principles, see *Grimpel Assocs. v. Cohalen*, 41 N.Y.2d 431, 361 N.E.2d 1022, 393 N.Y.S.2d 373 (1977); *Williams v. Town of Oyster Bay*, 32 N.Y.2d 78, 81, 295 N.E.2d 788, 343 N.Y.S.2d 118 (1973); *Salamar Builders Corp. v. Tuttle*, 29 N.Y.2d 221, 225, 275 N.E.2d 585,

unconstitutional taking.

There has been general agreement that the public interest in preserving the Park "justifies substantial encroachments upon the rights of private land-owners."¹³⁷ Although the courts generally have found a rational basis for particular administrative decisions of the APA,¹³⁸ the "taking" issue remains undecided. In *Horizon Adirondack Corp. v. New York State*,¹³⁹ the court dismissed a cause of action in "inverse condemnation" under the Act, but nonetheless urged the claimant to challenge the Act as an unconstitutional "taking." Thus, owners of land in resource management and rural use areas have not been foreclosed from showing that their land will not produce a reasonable return if relegated to the permitted agricultural or forestry uses.¹⁴⁰ Although the courts have upheld other zoning requirements of up to eighteen acre lots,¹⁴¹ the reasonableness of the forty-three acre requirement of the resource management areas remains untested.¹⁴²

In any event, the eminent domain/police power dichotomy has left land use regulation in a rather uncertain and sometimes inequitable state. Should the landowner succeed in his claim of a "taking," the contested regulation would no longer apply to his land. The government must then pursue its land use

325 N.Y.S.2d 933 (1971); *City of Buffalo v. J.W. Clement Co.*, 28 N.Y.2d 241, 269 N.E.2d 895, 321 N.Y.S.2d 345 (1971); *Arverne Bay Const. Co. v. Thatcher*, 278 N.Y. 222, 226, 15 N.E.2d 587 (1938).

¹³⁷ *Savage*, *supra* note 3, at 449. See also *Booth*, *supra* note 3, at 625; *Preserving Scenic Areas*, *supra* note 3, at 1721.

¹³⁸ See *McCormick v. Lawrence*, 83 Misc.2d. 64, 372 N.Y.S.2d 156 (Sup. Ct. Essex County, 1975), where the court upheld the APA's denial of a permit for a dock on aesthetic grounds; *Saggolf Corp. v. Lawrence*, 82 Misc.2d 100, 367 N.Y.S.2d 683 (Sup. Ct. Essex County, 1975), where the court upheld an APA decision to deny a map amendment on the ground that public facilities could not serve more intense development. But see *Tyler v. APA*, 58 A.D.2d 718, 396 N.Y.S.2d 285 (3rd Dept. 1977), where the Warren County Court charged the APA with abuse of its administrative powers, with special attention given to shoreline restrictions.

¹³⁹ 88 Misc.2d 619, 388 N.Y.S.2d 235 (Ct. Cl. 1976). The Horizon Adirondack Corporation purchased 24,000 acres in rural use and resource management areas for an extensive housing and recreational development.

¹⁴⁰ See *Horn*, *supra* note 52, at 1003.

¹⁴¹ See *Gisler v. Madera*, 38 Cal. App. 3d 303, 112 Cal. Rptr. 919 (1974), where the court upheld 18 acre zoning in the interests of preserving the agricultural character of the community. See also *Steel Hill Dev. Inc. v. Town of Sanbornton*, 469 F.2d 956 (1st Cir. 1972), where the court upheld the validity of an ordinance which required minimum lot sizes of 3 and 6 acres. However, the court emphasized that this was a special case, and would not evince general approval of the lot size requirement. *Id.* at 962. The minimum lot size requirements were justified as a means of preserving the ecological balance, scenic values, open space, and rural character of the area. In contrast, see *Kavanewsky v. Zoning Bd. of Appeals of the Town of Warren*, 160 Conn. 397, 279 A.2d 567 (1971), where the court held an increase in the minimum lot size requirement from one to two acres for an exclusionary purpose was not within the interests of the "public welfare" of the town; *Kit-Mar Builders, Inc. v. Township of Concord*, 439 Pa. 466, 268 A.2d 765 (1970), invalidating 2 and 3 acre minimum lot size requirements promulgated for exclusionary purposes.

¹⁴² See *Booth*, *supra* note 3, at 621, 625, where the author notes that while the stringent overall intensity guidelines applicable to the rural use and resource management areas are among the most controversial aspects of the APA Act, he expects they will be sustained as a valid exercise of the police power.

objectives either by the expensive procedure of acquiring property through its power of eminent domain or by confining its regulations to a standard of reasonableness.¹⁴³ In the former case, control objectives are likely to be compromised; in the latter, the individual property owner frequently suffers a substantial and inequitable deprivation of the use of his property.

The growing dissatisfaction with the all-or-nothing quality of the eminent domain/police power dichotomy and the increasing sophistication of land use regulation over the years have led courts¹⁴⁴ and commentators¹⁴⁵ to urge consideration of zoning with compensation. They assert that a provision for compensation better achieves the purpose of the fifth amendment that the individual not bear a disproportionate share of the public burden.¹⁴⁶ Not only would the imposition of costs restrain the government from excessive regulation,¹⁴⁷ the provision for compensation would tend to avert claims of "taking" which might otherwise compel the judicial invalidation of land use regulations.¹⁴⁸ The government thus obtains broader latitude in the exercise of its police power.

Absent statutory authority or condemnation proceeding by the government, courts have taken little initiative in awarding the landowner compen-

¹⁴³ See Costonis, "Fair" Compensation and the Accommodation Power: Antidotes for the Taking Impasse in Land Use Controversies, 75 COLUM. L. REV. 1021 (1975) [hereinafter cited as Costonis].

¹⁴⁴ See *Fred F. French Inv. Co. v. City of New York*, 39 N.Y.2d 587, 599, 350 N.E.2d 381, 388, 385 N.Y.S.2d 5, 12 (1976); *Golden v. Ramapo*, 30 N.Y.2d 359, 382, 285 N.E.2d 291, 334 N.Y.S.2d 138 (1972); *Horizon Adir. Corp. v. City of New York*, 88 Misc.2d 619, 632, 388 N.Y.S.2d 235, 243 (Ct. Cl. 1976).

¹⁴⁵ See generally Bergin, *Price-Exclusionary Zoning: A Social Analysis*, 47 ST. JOHN'S L. REV. 1 (1972) [hereinafter cited as Bergin]; Costonis, *supra* note 143; Ellickson, *Alternatives to Zoning: Covenants, Nuisance Rules, and Fines as Land Use Controls*, 40 U. CHI. L. REV. 681 (1973) [hereinafter cited as Ellickson]; *infra* note 151. With particular reference to compensation under the APA Act, see Horn, *supra* note 52.

¹⁴⁶ See *Armstrong v. United States*, 364 U.S. 40, 49 (1960), "The Fifth Amendment's guarantee that private property shall not be taken for a public use without just compensation was designed to bar Government from forcing some people alone to bear public burdens which, in all fairness and justice, should be borne by the public as a whole." The same would be true of the provision in the New York Constitution. N.Y. CONST. art. I, § 7(a).

¹⁴⁷ Aside from constitutional considerations, a concern for economic efficiency has caused numerous writers to propose zoning with compensation. See Ellickson, *supra* note 145, at 699: "The Achilles heel of zoning is that it does not correct the changes in wealth distribution it causes." See also Bergin, *supra* note 145. Both Bergin and Ellickson contend that political majorities unrestrained by costs tend to zone undeveloped lands into suboptimal uses.

¹⁴⁸ See *Kansas City v. Kindle*, 446 S.W.2d 807 (1969). But see *Golden v. Ramapo*, 30 N.Y.2d 359, 285 N.E.2d 291, 334 N.Y.S.2d 138 (1972), where the court upheld the validity of a local land use regulation, in part, because of the tax benefits provided to owners of the restricted lands. In *Fred F. French Inv. Co. v. City of New York*, 39 N.Y.2d 587, 599, 350 N.E.2d 381, 388, 385 N.Y.S.2d 5, 12 (1976), an adjustment in the real property tax was recommended as a means of averting the court's finding of a "taking" under a local zoning ordinance. See also Mandelker, *Notes from the English: Compensation in Town & Country Planning*, 49 CAL. L. REV. 699, (1961) [hereinafter cited as Mandelker], for a discussion of real property taxes on restricted property in England. In conjunction with voluntary land use programs, a number of states offer tax benefits. See COUNCIL ON ENVIRONMENTAL QUALITY, *THE UNTAXING OF OPEN SPACE* (1975) [hereinafter cited as *THE UNTAXING OF OPEN SPACE*].

sation for the diminution in value of his property. However, in some jurisdictions,¹⁴⁹ courts have awarded damages to landowners who successfully allege an "inverse condemnation" or "de facto" appropriation under land use regulation.¹⁵⁰ Unlike a condemnation proceeding which is brought by the government, the landowner initiates an action in inverse condemnation.¹⁵¹ Unlike a claim of taking, the landowner seeks an award of damages and not the invalidation of the regulation. Thus, where the landowner establishes that a taking has occurred and that he has been damaged as a result,¹⁵² inverse condemnation provides him with fair compensation and allows the court to uphold the validity of the regulation.¹⁵³ Of limited availability in New York,¹⁵⁴ this remedy already has been denied a landowner who alleged a de facto appropriation of his property under the APA Act.¹⁵⁵

The legislature may authorize the courts to award damages under the inverse condemnation theory or it may provide for some form of compensation without the necessity of a judicial proceeding. One writer has developed

¹⁴⁹ In *Brown v. Tahoe Regional Planning Agency*, 385 F. Supp. 1128, 1132 (D. Nev. 1973), the district court held that a valid regulation may nonetheless constitute a taking of private property for a public use entitling the owner to just compensation. See also *Berenson v. United States*, 548 F.2d 939 (Ct. Cl. 1977); *Dahl v. City of Palo Alto*, 372 F. Supp. 647, 649 (N.D. Calif. 1974). For a discussion of New York law with respect to inverse condemnation, see note 154 *infra*.

¹⁵⁰ See Comment, *'Takings' Under the Police Power—the Development of Inverse Condemnation as a Method of Challenging Zoning Ordinances*, 30 Sw. L.J. 723, 745 (1976) [hereinafter cited as *Inverse Condemnation*], which would define inverse condemnation as a remedy offered to a landowner whose property has been taken or damaged by the government without the institution of formal condemnation proceedings. It is attractive as a remedy because it implements the purpose of the fifth amendment, reduces the pressure on landowners and the courts to upset comprehensive land use plans, achieves a "fair" outcome, and deters arbitrary action by zoning officials. *Id.* at 735. See also Magavern, *The Evolution and Extension of the New York Law of Inverse Condemnation*, 24 BUFF. L. REV. 273 (1975) [hereinafter cited as Magavern]:

[M]ore intensive regulation of land use, both within the uncertain limits of the police power and by eminent domain techniques, has led to advocacy of the theory of inverse condemnation for two other purposes: (1) to provide compensation for temporary restriction of the use of property by invalid police power regulations; and (2) as a technique, by which the courts, when confronted with an otherwise invalid exercise of police power, may provide compensation for property losses and thereby sustain the regulatory measure as a valid exercise of the power of eminent domain.

Id.

¹⁵¹ See *Inverse Condemnation*, *supra* note 150, at 724.

¹⁵² *Id.*

¹⁵³ *Id.* at 736-38.

¹⁵⁴ In *New York*, a landowner may allege an "inverse condemnation" of his property where the taking is linked to an avowed taking statute, as opposed to a mere regulatory statute. *Lutheran Church in America v. City of New York*, 35 N.Y.2d 121, 316 N.E.2d 305, 359 N.Y.S.2d 7 (1974); *In re Keystone Ass'n. v. Moerdler*, 19 N.Y.2d 78, 224 N.E.2d 700, 278 N.Y.S.2d 185 (1966); *Forster v. Scott*, 136 N.Y. 577, 32 N.E. 976 (1893); *Charles v. Diamond*, 47 A.D.2d 426, 366 N.Y.S.2d 921 (4th Dept 1966); *Horizon Adir. Corp. v. State of New York*, 88 Misc.2d 619, 388 N.Y.S.2d 235 (Ct. Cl. 1976); Magavern, *supra* note 150.

¹⁵⁵ In *Horizon Adir. Corp. v. State of New York*, 88 Misc.2d 619, 624-31, 388 N.Y.S.2d 235, 240-45 (Ct. Cl. 1976), the court denied the landowner's claim of inverse condemnation on the grounds that the APA Act was clearly not a taking statute and that the fiscal impact of allowing such a cause of action would destroy the efficacy of the Act and usurp the prerogative of the legislature in allowing such a cause of action.

a theory and scheme, the "accommodation power,"¹⁵⁶ which the legislature might follow. The accommodation power calls for awarding the landowner some type of benefit when zoning restricts land to less than its "reasonable beneficial use."¹⁵⁷ These benefits take a variety of forms, including variances, "fair compensation" equal to the difference between reasonable use and regulated values, or compensation in non-dollar equivalents such as transferable development rights or tax benefits.¹⁵⁸ The accommodation power purportedly offers a remedy to the landowner at lesser cost to the government than eminent domain. In a sense, the accommodation power already has found application within the variance and permit provisions of the APA Act.¹⁵⁹

In addition to the concerns for the constitutional validity of and the inequities under land use regulations, public policy considerations provide compelling grounds for awarding compensation to the landowner. The severe dissatisfaction prevalent among the residents of the Park threatens to frustrate enforcement of the Act. Opponents of the Act contend that the promotion of a state interest by a centralized state agency works to the detriment of local objectives and autonomy.¹⁶⁰ In addition, they argue that the Act's restrictions upon development rights result in severe injury to property values in the Park.¹⁶¹ These grievances predispose the landowner to evade the Act's provisions and aggravate the enforcement problems that the Agency already experiences due to insufficient funding and understaffing.¹⁶² Thus, purely as a matter of public policy, the legislature should consider winning the support of the residents through some form of economic inducement.

Provision for compensation to landowners in the Park might not only avert

¹⁵⁶ Costonis defines accommodation power as "an intermediary between the police power absence of compensation and the eminent domain power's requirement of 'just compensation.'" Costonis, *supra* note 143, at 1022-23. He proposes the exercise of the accommodation power to accommodate the legitimate interests of government and of private landowners, "to fill the void that currently divides the police and eminent domain powers." *Id.* at 1023.

¹⁵⁷ See *id.*, at 1022, 1050-51, for an example of the proposed application of the accommodation power.

¹⁵⁸ *Id.* at 1022-23.

¹⁵⁹ See N.Y. EXEC. LAW §§ 806(3), 809 (McKinney Supp. 1977).

¹⁶⁰ See *Wambat Realty Corp. v. State of New York*, 41 N.Y.2d 490, 362 N.E.2d 581, 393 N.Y.S.2d 949 (1970), and its companion, *Town of Black Brook v. State of New York*, 41 N.Y.2d 494, 362 N.E.2d 579, 393 N.Y.S.2d 946 (1970), where the plaintiffs, a realtor and a town within the Park, alleged unsuccessfully that the APA Act unconstitutionally usurped the home rule powers of the town. The APA Act represents a "substantial departure from established methods of land use control, under which plans are conceived, enacted, and administered almost entirely by local units under broad enabling statutes." *Preserving Scenic Areas*, *supra* note 3, at 1706. However, proponents of the Act asserted that the local governments' lack of ability and initiative in the adoption of local land use regulations necessitated the Act. See Booth, *supra* note 3, at 615-16; *FUTURE OF THE ADIRONDACK PARK*, *supra* note 68, at 27-28; *Preserving Open Spaces*, *supra* note 3, at 1706-08.

¹⁶¹ See Horn, *supra* note 52, at 990; Savage, *supra* note 3, at 452-53.

¹⁶² See Booth, *supra* note 3, at 630: "Given the vastness of the Park, the task of enforcing the permit and shoreline restrictions of the Act will be successfully implemented only if the great majority of those people who undertake new activities in the Park comply voluntarily with the Act's provisions." *Id.* See also Savage, *supra* note 3, at 452-53.

a successful claim of "taking," but provide the landowner with an economic inducement to comply with the Act's provisions.¹⁶³ An adjustment in real property taxation might provide adequate compensation.¹⁶⁴ In numerous instances,¹⁶⁵ such an adjustment has already been utilized to supplement land use regulations which might otherwise be constitutionally infirm. The court of appeals has found that such tax benefits constitute sufficient compensation to avert claims of "taking" under compulsory regulation;¹⁶⁶ they also have recommended that the legislature offer such benefits.¹⁶⁷

The provision of tax benefits to achieve public objectives is not entirely new. To improve the economic status of certain classes of landowners in the community,¹⁶⁸ partial exemptions are granted to veterans¹⁶⁹ and the elderly.¹⁷⁰ Tax benefits also are provided to encourage certain land uses. For example, a landowner may voluntarily commit his land to agricultural¹⁷¹ and forestry¹⁷² uses and thereby obtain tax benefits. The creation of classes of property for such tax benefits has been held constitutional where such classes involve no unreasonable discrimination and promote a valid state purpose.¹⁷³

In the implementation of a real property tax solution in the Park, the legislature must: (1) define those classes of property upon which it may confer tax benefits; (2) determine the nature of the tax benefits to be conferred; and (3) consider remedies to incidental problems which arise for both local governments and assessors.

The provisions of the Act itself create classes of property upon which the legislature might reasonably confer tax benefits. Subject to stringent restrictions on the basis of natural resource limitations as well as public policy considerations,¹⁷⁴ resource management and rural use areas provide the state with a substantial benefit. Requiring approximately 42.7 and 8.5 acres per principal building in resource management and rural use areas,¹⁷⁵ respec-

¹⁶³ One commentator on the APA Act writes, "Restricting development for the primary purpose of maintaining the unique character of the Adirondacks, a value that offers little to the individual landowner and much to the public at large, would . . . appear to be better accomplished through some method of compensating the landowner for the rights he's being asked to give up." Horn, *supra* note 52 at 990. One landowner in the Park has obtained a stricter classification of his land under the Act purportedly to reduce his real property taxes. See *The Lake Placid News*, Mar. 8, 1978, at 1, col. 1.

¹⁶⁴ In *Horizon Adir. Corp. v. State of New York*, 88 Misc.2d 619, 632 (Ct. Cl. 1976), the court urged consideration by the Legislature of the conferral of tax benefits to landowners in the Park.

¹⁶⁵ See note 148 *supra*.

¹⁶⁶ See *Golden v. Town of Ramapo*, 30 N.Y.2d 359, 285 N.E.2d 291, 334 N.Y.S.2d 138 (1970).

¹⁶⁷ See *Fred F. French Inv. Co. v. City of New York*, 39 N.Y.2d 587, 599, 350 N.E.2d 381, 388, 385 N.Y.S.2d 5, 12 (1976); *Horizon Adir. Corp. v. State of New York*, 88 Misc.2d 619, 632, 388 N.Y.S.2d 235, 248 (Ct. Cl. 1976).

¹⁶⁸ See *STATE & LOCAL FINANCES*, *supra* note 5, at 149-57.

¹⁶⁹ N.Y. REAL PROP. TAX LAW § 458 (McKinney 1972).

¹⁷⁰ N.Y. REAL PROP. TAX LAW § 467 (McKinney 1972).

¹⁷¹ N.Y. AGRIC. & MKTS. LAW art. 25AA (McKinney 1972). See note 119 *supra*.

¹⁷² N.Y. REAL PROP. TAX LAW §§ 480, 480-a (McKinney 1972).

¹⁷³ See *People v. McDermott*, 239 A.D. 533, 267 N.Y.S. 683 (3rd Dept. 1933), *rev'd on other grounds*, 265 N.Y. 47 (1934), where the court upheld the constitutionality of N.Y. REAL PROP. TAX LAW § 480. See also note 83 *supra*.

¹⁷⁴ N.Y. EXEC. LAW § 805(3) (McKinney 1972).

¹⁷⁵ *Id.*

tively, overall intensity guidelines in these land use areas cause, in essence, the dedication of a significant portion of the private lands to open space use. In contrast, hamlet, moderate intensity, low intensity, and industrial use areas are subject to restrictions which are not so obviously designed to serve a public purpose and present less possibility for successful claims of "taking." Thus, there clearly exists a reasonable basis upon which resource management and rural use areas can be classified so as to accord them preferential treatment under the tax laws. Certainly, the reasonableness of such a classification would be analogous to the classification of forest lands under the Fisher Act¹⁷⁶ which was found to be reasonable in pursuit of the state's policy of encouraging the forest industry and providing open space.

Another reasonable classification might include critical environmental areas, such as wetlands, elevations of 2,500 feet or more, and areas within one eighth of a mile of a state forest preserve. All are accorded special treatment under the APA Act.¹⁷⁷ Provident environmental protection often may require that little, if any, development be allowed in these areas.¹⁷⁸

Once the legislature has created these reasonable classifications, a variety of tax benefits to the owners of classified lands may be provided.¹⁷⁹ Such benefits may be conferred through a deferred tax, a simple preferential tax, a deferred tax coupled with a restrictive agreement, or a reduction in taxation based upon an easement theory.

Similar to tax deferral provisions made under the Fisher Act,¹⁸⁰ the Forest Districts Law,¹⁸¹ and the Agricultural Districts Law,¹⁸² the landowner may be

¹⁷⁶ See note 173 *supra*.

¹⁷⁷ Pursuant to N.Y. EXEC. LAW § 810 (McKinney 1972), development in such critical environmental areas are regional projects which require a permit from the Agency before they can be undertaken by the landowner. In 1973, 67% of the Class A project proposals and 4% of the Class B project proposals were subject to APA review because of their location in or near a critical environmental area. See COMPREHENSIVE REPORT, *supra* note 6, at 29.

¹⁷⁸ See COMPREHENSIVE REPORT, *supra* note 6, at 21. Such a classification would not be unlike that employed under the Freshwater and Tidal Wetlands Acts.

¹⁷⁹ For a complete discussion of such laws in other states, see THE UNTAXING OF OPEN SPACES, *supra* note 148. "Differential assessment laws have been passed for the purpose of achieving two major objectives: tax relief for farmers and other owners of open land, and the preservation of open space." *Id.* at 113. "The programs adopted by forty-two states differ from one another in many ways but can be classified as pure preferential assessment, deferred taxation, and restrictive agreement programs. Pure preferential assessment programs simply provide for differential assessment. Deferred taxation programs require a payback or 'rollback' of some or all tax savings, and many also charge interest on these back taxes. Restrictive agreement programs require the participating owner to commit himself to use his land only for eligible, non-urban uses for a stated period of years; these agreements are subject to public enforcement." *Id.* at 114.

¹⁸⁰ N.Y. REAL PROP. TAX LAW § 480(2)(a)-(e) (McKinney 1972) provides that eligible tracts be assessed on the value of the planted or underplanted land excluding the value of planted trees, and that such assessment will be maintained until the removal of forest growth. A stumpage tax is levied upon the value of the timber when cut. In the event that the landowner withdraws his tract from the program, he is required to pay a tax on the value of the standing timber. The final filing date for classification under this section was September 1, 1974.

¹⁸¹ N.Y. REAL PROP. TAX LAW § 480-a (McKinney Supp. 1977) provides for exemption from real property tax equal to the lesser of: 80% of the total assessed value of the eligible parcel, or \$40 per acre multiplied by the equalization rate for the town in which the land is located. Upon

allowed to defer a substantial percentage of real property taxes on that portion of the land dedicated to open space use as a result of overall intensity guidelines or proximity to critical environmental areas. In the event that a variance, a permit, or a map amendment allowing for greater use is granted, or the landowner violates the provisions of the Plan, the landowner may be compelled to repay a percentage of the deferred taxes or the deferred taxes for a set period of past years. Such tax benefits not only provide an economic inducement to retain lands under the stricter land use restrictions, but may avert potential claims of "taking" as well.

Similarly, the legislature might provide for simple preferential tax treatment in the form of a partial exemption.¹⁸³ Requiring no payment of past uncollected taxes, preferential taxation provides the landowner with less inducement than a deferred taxation to retain his lands under stricter regulation and to comply with the Act. In New York, preferential treatment is applied to the property of various charitable, religious, and education organizations by way of real property tax exemptions.¹⁸⁴ As in the case of the deferred tax, preferential taxation also may avert claims of "taking."

A deferred or preferential tax program might be strengthened by requiring that the landowner enter into an agreement with the state. For example, the owner might agree to undertake improvements of his property consistent with the nature of the Park for a term of years. Upon breach of the agreement, a percentage of the deferred taxes would have to be repaid. In New York, both the Forest Districts Law¹⁸⁵ and the Agricultural Districts Law¹⁸⁶ include this restrictive agreement element.

Similar to a preferential tax in effect, the reduction in the assessment of classified property upon the theory that the restriction created an easement upon the land may be allowed. Illustrative of the application of this tax benefit, the Freshwater¹⁸⁷ and Tidal Wetlands Acts¹⁸⁸ provide for such reduc-

a cutting of the forest crop, the landowners must pay stumpage tax. When the tract is voluntarily converted to another use, a rollback tax is levied upon the land for years in which the exemption was granted. This section took effect in July, 1977.

¹⁸² See note 115 *supra*.

¹⁸³ See note 179 *supra*. A preferential tax simply reduces the tax assessed upon the property.

¹⁸⁴ N.Y. REAL PROP. TAX LAW § 421 (McKinney 1972) is the most notable of the real property tax exemptions in New York. Certain property might be totally exempt for one or more of three reasons: (1) due to the nature of the ownership; (2) due to impracticality; or (3) on the grounds of public benefit. See STATE & LOCAL FINANCES, *supra* note 5, at 120. The underlying theory of partial exemption is that of public benefit and such an exemption might be authorized as an incentive for the creation or maintenance of property essential to the public benefit, as a subsidy to private individuals in need of assistance, or as an incentive or method of protecting certain types of land use. *Id.* at 136.

¹⁸⁵ N.Y. REAL PROP. TAX LAW § 480-a conditions the receipt of a tax benefit upon the commitment of the tract to forest crop product for a period of at least eight years. It is further required that the landowner maintain the land according to forest management practices approved by the Department of Environmental Conservation.

¹⁸⁶ N.Y. AGRIC. & MKTS. LAW § 305(1) (McKinney 1972) requires that the landowner apply annually for the tax benefits which are conditioned upon meeting the eligibility requirements of the statute.

¹⁸⁷ N.Y. ENVIR. CONSERV. LAW § 24-0905 (McKinney Supp. 1978).

¹⁸⁸ N.Y. ENVIR. CONSERV. LAW § 25-0302(2) (McKinney Supp. 1978).

tions in the assessments of wetlands in which little, if any, development will be allowed.

Any of these tax programs would entail a reduction in the tax base of the municipal corporation.¹⁸⁹ A provision for state subvention then would serve to maintain the fiscal capacity of the municipal corporation and to remove this additional tax burden from the municipal taxpayers. The state would bear the cost of the tax benefits.

The administration of any of these tax benefit programs may impose a significant responsibility upon a local assessor already burdened by the administration of the existing law.¹⁹⁰ In a sense, the assessor would be undertaking the enforcement of the APA Act. However, this consideration should not cause the legislature to reject a tax program, but to provide for adequate administrative assistance.

Although these tax benefits may involve substantial cost, the state promotes a substantial public interest through the efficient enforcement of provident environmental planning. Efficient enforcement of the Plan may be assured if, through the provision of tax benefits, the vehement opposition of the Park residents is quelled and the possibility of a successful "taking" claim averted.

Critics of the application of real property tax adjustments to achieve non-tax policy have asserted that direct subsidies might more accurately reflect the cost of the programs¹⁹¹ and also provide greater inducement to the landowner to adhere to the restrictions of the Plan.¹⁹² This is because the landowner's tax liability may not be reduced below zero and hence may not constitute a sufficient reward. However, should a mere reduction in tax liability be found inadequate, the legislature might offer the landowner a tax credit against future real property tax or possibly income tax liabilities.

Probably the most damaging criticism is directed at the administration of the Real Property Tax Law itself. Presently, the most common abuse of an assessor's discretion is the practice of de facto classification, the classification of property without statutory authority, according to its use as residential, commercial, utility, or vacant property. An assessor typically assesses these classes at widely varying percentages of their full value.¹⁹³ The practice represents a departure from uniformity of assessment and has been condemned by the courts in recent years.¹⁹⁴ Not only may the discretion of the assessor

¹⁸⁹ See *STATE & LOCAL FINANCES*, *supra* note 5, at 136-37. Because exemptions result in a diminution of the tax base, the tax rate must increase upon the non-exempt properties to generate revenues.

¹⁹⁰ In an average urbanized area, a diligent assessor may complete 1000 assessments per year of the 5000 required. See *STATE & LOCAL FINANCES*, *supra* note 5, at 18. The administration of partial tax exemptions has posed an additional burden which can be seen as a primary cause of increased mistakes in assessment. *Id.* at 139.

¹⁹¹ *Id.*

¹⁹² However, land use regulation which depends entirely on such economic inducements as tax benefits has not been entirely effective. See *THE UNTAXING OF OPEN SPACES*, *supra* note 148, at 115-18.

¹⁹³ See note 95 *supra*.

¹⁹⁴ See *Hellerstein v. Assessor of the Town of Islip*, 37 N.Y.2d 1, 332 N.E.2d 279, 371 N.Y.S.2d 388 (1975).

prevent assessment at full value, but procedural constraints may cause such faulty assessments to remain for long periods of time.¹⁹⁵ As a general rule, a change in assessment occurs only when the property has been sold or improved¹⁹⁶ a general reassessment has been made, or a landowner petitions and obtains a reduction in his taxes.¹⁹⁷ As a result, the practical application of the real property tax generates significant distortions in the tax base and imposes an inequitable tax burden on particular classes of landowners.¹⁹⁸ Thus, any adjustment in the Real Property Tax Law based on the assumption that taxation does accurately reflect land value may be inappropriate. This dilemma, however, is best resolved through the correction of the present administration of the law.

IV. CONCLUSION

The APA Act represents one of the more vigorous exertions of the state's police power in the advancement of the public welfare. However, by virtue of its potentially high cost to Adirondack municipal governments and individual landowners, the Act may harbor the cause of its ultimate failure. It is arguable that the Act borders on the outer limits of reasonableness and thus may be constitutionally infirm. Even if found to be a valid exercise of police power, the Act may shift to the municipal corporation and the individual landowner located within the Park a disproportionate share of the burden in promoting a state interest which should be more equitably borne by the entire state. For the sake of both equity and effective land use planning, the state should ensure that, through adjustment in real property taxes, Park residents are compensated for the adverse effects of land use restrictions promulgated in the interests of the state.

¹⁹⁵ See *STATE & LOCAL FINANCES*, *supra* note 5, at 24.

¹⁹⁶ This results in what is known as price level stagnation. Although there may have been a significant change in the value of the property, the assessed value will not reflect that change until there has been a sale of the property. See *STATE & LOCAL FINANCES*, *supra* note 5, at 20-21.

¹⁹⁷ See note 84 *supra*.

¹⁹⁸ See note 195 *supra*.

REGULATING LAND USE WHILE TAXING TENANTS AND HOMEOWNERS EQUITABLY: AN ALTERNATIVE TO THE REAL PROPERTY TAX SYSTEM†

KAREN LEE MCCLEARY

INTRODUCTION

In 1976, Prince George's County, Maryland levied a "multi-family occupancy tax"¹ which taxed, at a rate of four percent of the monthly rent, all tenants who dwelt in buildings having two or more rental apartments.² Originally designed in 1975 as a two percent tax, the measure was intended to raise needed revenue by equalizing existing property tax burdens between tenants and homeowners.³ The county characterized

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1. Prince George's County, Md., Ordinance CB-77-1976 (June 1, 1976) (expired June 30, 1977) (amending PRINCE GEORGE'S COUNTY, MD., CODE §§ 10-225.1 to .5 (1975)) (increasing tax from 2% to 4%). See Law of May 25, 1976, ch. 925, 1976 Md. Laws 2619 (repealing and reenacting Law of July 1, 1975, ch. 897, 1975 Md. Laws 3,800) (authorizing Prince George's County to enact the renters' tax).

2. The ordinance specifically excluded transient facilities, single-family residences, and condominiums; and exempted elderly, disabled, and low-income tenants, and those receiving nonmilitary housing subsidies. The tax was considered to be part of the rent, and the ordinance granted the landlord, as collection agent, the same remedies against the tenant for nonpayment of the tax as he had under common law for nonpayment of rent. Termed a "trustee" for the county, the landlord was personally liable for failure to collect or remit the tax. Civil and criminal penalties were defined for both tenant and landlord. Prince George's County, Md., Ordinance CB-77-1976, § 1 (June 1, 1976) (expired June 30, 1977).

3. Before reenacting the tax in 1976, the county commissioned experts to study the property tax burdens borne by tenants and homeowners as compared to costs of the services that they consume. The experts examined four housing groups—detached homes, elevator apartments, garden apartments, and townhouses—and computed the total of federal, state, and local taxes paid by residents in each group. To allocate local property taxes to tenants in multi-family dwellings, the property tax assessed for each building was divided by number of units, assuming a 100% passthrough. When comparisons were made by using median income figure for each housing type, the study concluded that tenants in elevator buildings paid the greatest amount of tax in proportion to services consumed; homeowners paid the next greatest; tenants of garden apartments next; and tenants of townhouses paid the least. When the study compared tax burdens according to various income groups within each use, instead of according to one median income for each use, it concluded that *all* tenants paid a greater amount of the cost of services consumed than did *all* homeowners. As income increased, the

the tax as an excise on the privilege of using and occupying an apartment.⁴

No other jurisdiction in the United States has attempted to levy a tax on the residential use of all leased real property.⁵ The only other residential use taxes are a nominal charge on mobile homes,⁶ which more properly may be considered a license fee, and hotel occupancy taxes, which are directed at temporary residents.⁷ Typically, occupancy taxes on real property are levied only on commercial uses and are assessed in relation to either the rent paid by the taxpayer,⁸ or the floor space used for business,⁹ whether the taxpayer owns or merely occupies the property.¹⁰

renters paid increasing amounts of tax as compared to service costs. Telephone interview with Kathy Dexter, Consultant who performed the study, Washington, D.C. (March 2, 1978).

The county refused to accept the results of the study, and enacted the renters' tax, apparently on the basis of its own examination of local tax burdens. In later litigation, it claimed that "the tax is imposed in an attempt to equalize the burden of providing the cost of government services." Brief for Appellee at 2, *Landon Court Tenant Ass'n v. Prince George's County*, Eq. No. D-9905 (P.G. Cir. Ct. Aug. 4, 1975) (en banc). The court in *Landon Court* accepted the county's finding that tenants did not pay their share of government costs. *Landon Court Tenant Ass'n v. Prince George's County*, Eq. No. D-9905, slip op. at 5 (P.G. Cir. Ct. Aug. 4, 1975) (en banc) (affirming opinion of trial judge). The county commissioner made public statements, however, that indicated that the claim of disparate tax burdens may belie the county's intent to exclude apartment dwellers by taxing them. See note 96 *infra*.

4. Prince George's County, Md., Ordinance No. CB-77-1976, preamble (June 1, 1976).

5. The Maryland Court of Appeals characterized an Arizona renters' tax as similar to Prince George's County's. *Weaver v. Prince George's County*, 281 Md. 349, 351 n.1, 379 A.2d 399, 400 n.1 (1977) (citing ARIZ. REV. STAT. §§ 42-1701 to -1729 (Supp. 1977)). The Arizona statute, however, taxed only those tenants who held leases that were entered into prior to Dec. 1, 1967, seven years before the enactment of the bill. The tax, therefore, was directed only at permanent residents. See ARIZ. REV. STAT. §§ 42-1701(5) -1711 (Supp. 1977).

6. E.g., ILL. ANN. STAT. ch. 120, § 1201-1214 (Smith-Hurd Supp. 1977) (annual privilege tax at \$.15 per square foot of mobile home; reduced for senior citizens with low income).

7. E.g., FLA. STAT. ANN. § 212.03 (West 1960 & Supp. 1976) (taxes 4% of consideration and exempts permanent residents); N.Y. CITY AD. CODE §§ vv46-10 to -19.06 (McKinney 1968), reprinted in [1969] 4 N.Y. TAX REP. (CCH) ¶¶ 193-631 to -692 (1970) (tax of up to 5% of consideration for use or occupancy of hotel room, except those rooms in which individuals reside permanently or for more than 90 days).

Every transient occupancy tax, whether on motels, hotels, apartment buildings, tourist homes, or trailer camps, exempts permanent residents and, in most cases, residents for more than 30 consecutive days. Even the Florida statute, which taxes occupancy of rooms for less than 12 months, also exempts occupancy in buildings "primarily intended for permanent lease." Whether a building qualifies for this exemption depends upon whether it caters to the public, whether less than half of its tenants have "continuous residence," and whether it advertises extensively. FLA. STAT. ANN. § 212.03(7) (West Supp. 1976). Presumably, hotel taxes are assessed on nonresidents in lieu of property taxes. Heyman & Gilhool, *The Constitutionality of Imposing Increased Community Costs on New Suburban Residents through Subdivision Exactions*, 73 YALE L.J. 1119, 1153 (1964).

Many states tax the transfer of real property, but Hawaii alone specifically includes leases and subleases in the class of taxable transfers. HAW. REV. STAT. § 247-2 (Supp. 1975) (\$.05 per \$100 of consideration paid; minimum \$1).

8. E.g., FLA. STAT. ANN. § 212.031 (West 1972) (tax of 4% of rent charged by persons privileged to be in the business of leasing real property, unless property is agricultural, residential, or

The renters' tax had two major flaws.¹¹ First, although the county ostensibly designed it to equalize residential property tax burdens, the combined state, local, and federal tax systems already disfavor tenants; thus, the tax only added to tenants' tax burdens. Second, by taxing particular kinds of residential uses at various rates, the county can exclude certain unpopular groups of residents. The powerful interjurisdictional effects of an excise-like tax enable a community, which cannot constitutionally engage in exclusionary zoning, to substitute its taxing power for the more traditional police power.

Although the renters' tax is not a proper means to place taxation of tenants on par with taxation of homeowners, its structure does introduce the concept that a local tax can be based partially on the costs that a community incurs in supporting particular uses of real property. Such a land use tax can help to equalize tax burdens between tenants and homeowners. By adopting a new model of judicial analysis for challenges to the proposed land use tax, courts can ensure that communities do not use it to exclude new residents unconstitutionally.

I. TENANTS VERSUS HOMEOWNERS: TAX INEQUITIES AND EXCLUSIONARY ZONING

A. *The Current Property Tax System*

Our nation's tax system, encompassing local property taxes and federal and state income taxes, imposes a greater tax burden on tenants than on

subject to parking tax; tax passed on to tenant); N.Y. CITY AD. CODE §§ E46-4.0 to -19.0 (McKinney 1968), *reprinted in* [1969] 4 N.Y. TAX REP. (CCH) ¶¶ 192-104 to -132 (1939) (annual occupancy tax of \$2 to \$12 on leases for 1½ months or more, if property is used for gainful purposes); *id.* §§ L46-1.0 to -19.0 (McKinney 1968), *reprinted in* [1969] 4 N.Y. TAX REP. (CCH) ¶¶ 192-801 to -876 (1963) (occupancy tax graduated to 7¼% of rent on leases for more than 14 days, if property is used for commercial or professional purposes, unless 75% or more is leased to residents).

9. *E.g.*, PHILADELPHIA, PA., CODE § 19-1800, *as amended by* Bill No. 1860 (July 1, 1970), *reprinted in pertinent part in* John Wanamaker, Philadelphia v. School Dist., 441 Pa. 567, 569-71 n.2, 274 A.2d 524, 525 n.2 (1971) (according to formula).

10. Occupation taxes, a variation of commercial occupancy taxes, are levied against owners of businesses, and are measured by gross income or profits, or by floor space. *E.g.*, N.M. STAT. ANN. § 72-16A-4 (Supp. 1975) (4% of gross receipts for engaging in any business); Overland Park, Kan., Ordinance OT-601 (July 20, 1970) (owners of rental apartments pay occupation tax on privilege of engaging in business; tax rate of \$.0035 per square foot of living space available for lease) (held to be a valid excise tax in Callaway v. City of Overland Park, 211 Kan. 646, 508 P.2d 902 (1973)). *See Note, Municipal Corporations*, 22 KAN. L. REV. 151 (1973). The economic effect of the occupation tax on the landlord and the occupancy tax on the lessee may be identical if the tax is passed through. *See notes 45-55 & accompanying text infra*.

11. Because of the political controversy that surrounded the renters' tax, the county permitted the annual tax ordinance to lapse in 1977. *See* Prince George's County, Md., Ordinance CB-77-1976, § 3 (June 1, 1976) (expired June 30, 1977) (amending PRINCE GEORGE'S COUNTY, MD., CODE §§ 10-225.1 to .5 (1975); note 96 & accompanying text *infra*).

homeowners. Several factors create this inequity. Tenants actually do pay a substantial amount of property tax on the real estate on which they reside because of property appraisal methods and a shift in the economic incidence of local property taxes.¹² Tenants, unlike homeowners, however, cannot deduct those payments under state and federal income taxes.¹³

In addition, tenants' market positions are, on the average, lower than homeowners'.¹⁴ The property and income tax system shifts their positions to the additional disfavor of tenants. Given these inequities, a renters' tax such as the Prince George's County measure further penalizes a tenant for his choice of lifestyle.

1. Appraisal of real property for tax purposes

In the United States, local governments, under a state's limited delegation of its sovereign taxing power,¹⁵ commonly assess and collect real property taxes.¹⁶ Most state constitutions limit the delegated taxing power in two important ways:¹⁷ taxing jurisdictions must levy taxes *ad valorem*,¹⁸ that is, according to the value of property taxed,¹⁹ and they

12. See notes 15-55 & accompanying text *infra*.

13. See I.R.C. § 164(a).

14. See note 60 *infra*.

15. E.g., COLO. REV. STAT. § 31-20-101 (1974) (municipality may tax same kinds and classes of property within municipality as are subject to taxation for state and county purposes); see 16 E. McQUILLAN, MUNICIPAL CORPORATIONS §§ 44:03, :05 (1972); Currier, *Exploring the Role of Taxation in the Land Use Planning Process*, 51 IND. L.J. 27, 39 (1975).

Courts usually construe narrowly the extent of the delegation of the state's taxing power to localities. Some municipalities operate under home rule provisions which obviate the need for the states to repeatedly pass statutes enabling the municipality's exercise of power. E.g., ALASKA STAT. § 29.33.030 (1972) (general property tax by home rule); KAN. CONST. art. 12, § 5(b); KAN. STAT. § 19-101 (1974). Those municipalities thus may have inherent power to tax. Currier, *supra*, at 39; Note, *Municipal Corporations*, 22 KAN. L. REV. 151 (1973).

16. E.g., ARK. CONST. amend. 47, § 1 (Supp. 1975) (no *ad valorem* tax shall be levied by state, only by municipality). The property tax remains the greatest source of local revenue. H. AARON, WHO PAYS THE PROPERTY TAX?—A NEW VIEW 9 (1975) (study done for Brookings Institute) (82.91% of all local taxes in 1973, nationwide); Rothenberg, *A New Look in State Finances: Tax Reduction and Restructured Tax Systems*, 27 NAT'L TAX J. 175, 178 (1974) (46% of all state and local collections in 1961 and 38% in 1973).

17. Constitutions may provide a variety of other restrictions as well. For example, many states limit the tax rate to a specified percentage of the assessed value of all property in the jurisdiction. E.g., ALA. CONST. art. 11, §§ 214-216 (state limited to annual levy of .65% of taxable property, county to .50%, municipalities to 1.25%); ALASKA STAT. § 29.53.050 (1972) (municipality limited to 3% of assessed value, unless the revenues are used to pay bonds). The percentage may vary among the states to account for different fractional assessments. See note 19 *infra*.

18. E.g., ALA. CONST. art. 11, § 211 (taxes assessed in exact proportion to the value of property); WASH. REV. CODE ANN. § 84.40.030 (1962) (all property valued at what it is fairly worth in money at time of assessment).

19. Statutory definitions and practical constructions of the term "value" vary considerably. See,

also must tax each class of property²⁰ equally and uniformly²¹ throughout the taxing jurisdiction.²²

e.g., KY. REV. STAT. § 132.190(3) (1977) ("fair cash value"); NEV. REV. STAT. §§ 361.025, .225 (1973) ("full cash value"); OR. REV. STAT. §§ 308.205, .232 (1975) ("true cash value").

In practice, the appraised values rarely constitute 100% of the fair market value, possibly because market values fluctuate rapidly in densely populated areas, reassessments do not occur frequently enough, or assessments simply are inaccurate. Instead, appraised values are now assessed in terms of a fraction of the value of the property. See H. AARON, *supra* note 16, at 14-17, 63-64. See generally Comment, *The Road to Uniformity in Real Estate Taxation: Valuation and Appeal*, 124 U. PA. L. REV. 1418, 1422-28 (1976) [hereinafter cited as *The Road to Uniformity*]; Note, *The Valuation of Leaseholds for Ad Valorem Property Tax Purposes—The Reasonable Assessor Standard*, 1968 WASH. U.L.Q. 136, 139 [hereinafter cited as *The Reasonable Assessor Standard*].

To bring statutory requirements into parity with practice, many legislatures have prescribed the percentage of value that the fractional assessment shall represent. *The Road to Uniformity, supra* at 1424; *e.g.*, HAW. REV. STAT. § 246-3 (Supp. 1975) (department of assessment may choose percentage of fair market value); IDAHO CODE § 63-2217 (1976) (20% of full cash value); ILL. ANN. STAT. ch. 120, § 501 (Smith-Hurd Supp. 1976) (33-1/3% of fair cash value for counties with a population of more than 200,000); NEB. REV. STAT. § 77-201 (1976) (35% of actual value); N.D. CENT. CODE § 57-02.28 (1972) (50% of true and full value).

Iowa and Kentucky still require assessment at 100% of fair market value. IOWA CODE ANN. § 441.21(1) (West Supp. 1977); KY. CONST. § 172. The New Jersey courts once construed "full value" to require assessment at 100% of fair market value. *Switz v. Township of Middletown*, 23 N.J. 580, 130 A.2d 15 (1957). The legislature now allows each county board of taxation to annually fix its own fractional assessment between 20% and 100% of the true value. N.J. STAT. ANN. §§ 54:4-2.25 to -2.26 (West 1960).

20. In many states, all property belongs to one class, whether devoted to residential, industrial, or commercial uses, *e.g.*, ARK. CONST. art. 16, § 5 (no one species at higher rate than any other); GA. CODE ANN. § 2-4603 (1977), and whether owned by a private corporation, an association, or an individual, *e.g.*, ALA. CONST. art. 11, § 217. See *The Road to Uniformity, supra* note 19, at 1421 n.34.

Uniformity requirements inhibit property tax reform. Matthews, *The Function of Constitutional Provisions Requiring Uniformity in Taxation*, 38 KY. L.J. 31, 32 (1949). Some states, therefore, now allow assessment percentages to vary according to the nature of the use. *E.g.*, ARIZ. REV. STAT. § 42-227(6) (Supp. 1977) (assessment ratio 27% for apartments, 15% for owner-occupied homes). Enactment of such a provision in most states would require a constitutional amendment.

In order to protect agricultural, horticultural, and open-space lands from urban sprawl, some states specify that owners of such property may covenant with the taxing district to have their property assessed for its actual use rather than for its "highest and best" use. *E.g.*, DEL. CODE tit. 9, §§ 8328-8335 (1975) (land devoted for five years or more to agricultural, horticultural, or forest use may be appraised for that use if declared by the owner). See generally Zimmerman, *Tax Planning for Land Use Control*, 5 URB. LAW. 639, 652-55 (1973). This reclassification, however, is not of constitutional dimension. It merely restricts by covenant the classification of property before the property's assessment, and therefore it has been held not to be a taxing measure subject to uniformity provisions. *Bensalem Township School Dist. v. County Comm'rs*, 8 Pa. Commw. 411, 303 A.2d 258 (1973) (construing PA. STAT. ANN. tit. 16, §§ 11,941-947 (Purdon Supp. 1977-1978)); *cf.* PA. CONST. art. 8, § 2(b)(i) (1874, amended 1973) (adopted one month after *Bensalem* decision) (as exception to uniformity requirement, legislature may establish special standards for agricultural and forest reserves and active agricultural uses).

21. The uniformity clause "forbids the taxing of one man's land at a lower rate than another's simply because of the type of building erected, or the type of business conducted thereon." John Wanamaker, *Philadelphia v. School Dist.*, 441 Pa. 567, 580, 274 A.2d 524, 530 (1971) (Roberts, J.,

Assessors must administer the tax in a manner that carries out these constitutional requirements.²³ Their most important and difficult task is to appraise real property's fair market value, which is "the amount a willing buyer, who is not obliged to buy, would pay to a willing seller, who is not obliged to sell."²⁴

Assessors have three traditional methods from which they may choose in order to determine that value.²⁵ They select the appraisal method for

dissenting) (quoting *Madway v. Board for Assessment and Revision of Taxes*, 427 Pa. 138, 146-47, 233 A.2d 273, 278 (1967)) (emphasis supplied). Even when assessors make fractional assessments, the percentage of full value must be uniform for a particular class of property throughout the jurisdiction. *State v. Board of Tax Appeals*, 175 Ohio St. 410, 195 N.E.2d 908, cert. denied, 379 U.S. 818 (1964).

Failure to achieve exact equality among final tax bills will not be deemed unconstitutional or contrary to statute as long as the assessor did not intentionally discriminate or follow arbitrary practices. *Currier*, *supra* note 15, at 41. See *District of Columbia v. Green*, 310 A.2d 848, 854-57 (D.C. 1973). This standard of uniformity has been applied in federal court within the context of the equal protection requirement. *Allied Stores v. Bowers*, 358 U.S. 522 (1959). The deferential standard of review has resulted in highly disparate tax bills among properties of similar value. See H. AARON, *supra* note 16, at 16 n.17 (coefficient of dispersion as low as 1.1 and as high as 85.2). See Matthews, *The Function of Constitutional Provisions Requiring Uniformity in Taxation*, 38 KY. L.J. 31, 187, 377, 503 (1949-1950) for an excellent discussion of the law of uniform taxation.

22. *E.g.*, ARIZ. CONST. art. 9, § 1 (uniform on same class of property within territorial limits of taxing authority); ILL. ANN. STAT. ch. 120, §§ 627-633 (Smith-Hurd 1974 & Supp. 1977) (state department may raise or lower assessments in any county to make them uniform among all counties). County boards of equalization often assure that interjurisdictional differentials in effective tax rates are minimized. *E.g.*, MINN. STAT. ANN. § 274.13 (West Supp. 1977).

23. After an assessor appraises all property in the jurisdiction, he applies the fractional assessment ratio to determine the assessed value of each parcel. He then sums all assessed values and establishes a tax rate within constitutional or statutory limits sufficient to meet annual budgetary demands. See *The Road To Uniformity*, *supra* note 19, at 1418-19. Nominal tax rates range from 3% to 10%. Because of different fractional assessment levels, effective rates range from 1.2% to 3%. Heller, *The Theory of Property Taxation and Land Use Restrictions*, 1974 Wis. L. REV. 751, 766 n.39.

The assessor or the local board of assessment compiles the tax rolls to indicate, for each piece of property, the assessed value, the tax liability, and the person responsible for its tax. After receiving their tax bills, taxpayers may appeal the assessment to administrative boards established by state and local statutes and, finally, to the courts. R. BRANDON, J. ROWE, & T. STANTON, *TAX POLITICS*, 174-76 (1976) [hereinafter cited as *TAX POLITICS*].

Traditionally, the person liable for the tax is the owner in fee. Some states allow others who have actual liability for the remittance, for example, an industrial lessee who has contracted to pay the tax as part of his consideration for right of possession, to enter their names below the owner's name on the tax roll. *E.g.*, ALASKA STAT. § 29-53.100(b) (1972); CAL. REV. & TAX. CODE § 610 (West 1970).

24. *The Reasonable Assessor Standard*, *supra* note 19, at 139 n.24 (citing cases).

25. Heller, *supra* note 23, at 752 n.3; *The Road to Uniformity*, *supra* note 19, at 1430-33; *The Reasonable Assessor Standard*, *supra* note 19, at 139. A few states provide a formula with which the assessor determines fair market value. Even these formulas, however, rely upon the three traditional methods. In Nebraska, for example, assessors ascertain "actual value" by considering the property's 1) earning capacity, 2) relative location, 3) desirability of function and use, 4) reproduction cost less depreciation, 5) value compared to other property of known or recognized value, 6) market value in

each parcel of property according to the use of that property,²⁶ and, in doing so, they view property as if it were being put to its "highest and best use."²⁷ Assessors may use all three methods within a given jurisdiction.

Under the comparable sales method, assessors impute to the appraised property the value at which similar property recently was sold. Generally regarded as the most accurate,²⁸ this method relies on the similarity of such factors as the type of neighborhood in which the property is located, the improvements that have been made on the property, the business conducted on the property, the income produced, and the size, age, design, quality, and type of construction of the building.²⁹ Because a sufficient number of similar properties are needed to make a meaningful comparison, the method is effective for single-family homes, but impractical for unique properties, such as some apartment houses.³⁰

Using the reproduction-cost-new-less-depreciation method (RCNLD), assessors obtain a value for only the building, and add to it the value of the land as determined by the comparable sales method.³¹ RCNLD is

the ordinary course of trade, and 7) existing zoning classification. NEB. REV. STAT. § 77-112 (1976).

26. One commentator has suggested that assessors apply all three methods to the same property, and collate the results for a final value. Since each method theoretically generates the one true value, any discrepancy would indicate a problem in the appraisal. *The Reasonable Assessor Standard*, *supra* note 19, at 139 (discussion with respect to leaseholds in tax-exempt land) (citing J. KNOWLES, JR. & J. PERVEAR, *REAL ESTATE APPRAISAL MANUAL* 6-19 (2d ed. 1966)). *Accord*, *The Road to Uniformity*, *supra* note 19, at 1430-31 (optimal valuation employs all three methods, and some states require all three on any given assessment appeal).

Britain's "rates" system avoids the inaccuracies inherent in choosing an appraisal method. The British system bases the property tax, or rates, on the rental value of the property, which, because of rent control, rises more slowly than the rate of inflation. The central government levies all rates by computing an average tax per person to bring poor and rich districts into uniformity, thereby discarding assessment procedures that are subject to error or abuse. Roberts, *Some Notes from the British on Equalizing Property Taxes and Re-Organizing Governments*, 6 URB. LAW. 572 (1974).

27. TAX POLITICS, *supra* note 23, at 176.

28. *The Road to Uniformity*, *supra* note 19, at 1431.

29. *Id.* at 1431-32; *The Reasonable Assessor Standard*, *supra* note 19, at 141. As the properties compared need not be identical, no one factor is controlling. *The Road to Uniformity*, *supra* note 19, at 1431.

30. *The Road to Uniformity*, *supra* note 19, at 1431.

31. *Id.* at 1432; *The Reasonable Assessor Standard*, *supra* note 19, at 142. The name is self-explanatory: the assessor takes the cost required to duplicate the building, including materials, labor, capital, and supervision, and reduces it by the amount the building has depreciated. Significant problems arise when the assessor must decide whether to use the current reproduction cost or the historical cost. *See id.* at 143-44. Because of the need for available replacements from which to estimate costs, the results are inaccurate to a degree dependent upon the age of the building. RCNLD often is used only to check the accuracy of another method. *The Road to Uniformity*, *supra* note 19, at 1433.

especially useful for improved properties and specialty buildings which are unique and cannot be compared to recent sales.³²

The third assessment method, capitalization of income, measures the potential for income production in order to determine property value. Assessors apply a capitalization rate to annual net income for each year remaining in the life of the property, and sum these annual values to obtain current fair market value.³³ This method is appropriate for appraising apartment houses and other investment properties.³⁴ For apartment complexes, net income equals the total of all rents paid³⁵ less reasonable expenses.³⁶

A comparison of the three appraisal methods demonstrates that apartments generally have a higher market value per acre of land than do most detached homes.³⁷ Since apartments are assessed by capitalizing income, every rent-producing unit added above ground increases the tax bill, despite the fact that ground space remains constant.

Not only are the actual market values of apartments high, but in addition, apartments are not appraised with the same degree of accuracy as are single-family homes.³⁸ In Boston, for example, the ratio of assessed value to fair market value for one year was sixty percent higher than that

32. *The Road to Uniformity*, *supra* note 19, at 1432-33 (specialty buildings include opera houses, stock exchanges, some office buildings); *The Reasonable Assessor Standard*, *supra* note 19, at 142.

33. *The Road to Uniformity*, *supra* note 19, at 1433-34. Annual net income represents gross income less expenses. Future years may be evaluated by a three to five year average indicating "stabilized net income." *Id.* at 1434.

34. *Id.* at 1433.

35. Traditionally, assessors determined fair rental value by referring to comparable rentals rather than to rents actually contracted for during the year. *Id.* at 1434-35. Recently, courts and scholars have thought contract rent to be a better indicia of fair rental value, since tenants are unlikely to be charged less than their interest is worth. They argue that actual rent should be disregarded only if the assessor proves that fair market rent is higher. *Id.* at 1435. See *Parkview Village Assocs. v. Collingswood*, 62 N.J. 21, 297 A.2d 842 (1972) (actual rent prima facie evidence of value, rebuttable only by clear and convincing evidence); Koeppel & Kramer, *Property Tax Assessments: Contract Rent is Fair Market Rent, Or Is It?*, 2 REAL EST. L.J. 561, 572-73 (1973) (suggesting that in leases with at least five years remaining, the present worth of the differential between capitalization of actual rent and of fair market rent should be added to the value obtained by capitalization of actual rent). In cases which the property is rented under a long term lease, however, a comparable rentals method still may be more accurate, since inflation may have raised the rental value to more than the contract price. See *The Road to Uniformity*, *supra* note 19, at 1435-36. This controversy over whether contract rent accurately reflects fair market value is important to an alternative property taxing system discussed in note 125 *infra*.

36. Expenses must be reasonable to preclude owners from artificially diminishing their property taxes. *The Road to Uniformity*, *supra* note 19, at 1437-38.

37. See Babcock & Bosselman, *Suburban Zoning and the Apartment Boom*, 111 U. PA. L. REV. 1040, 1062-65, 1067 (1963).

38. This assertion makes no statement about which use is appraised more accurately.

ratio for single-family homes.³⁹ The reasons for this disparity are unclear.⁴⁰

As a result of the high actual value and the disparities in appraised values, most apartments do not automatically erode the tax base simply because of the extra residents they attract.⁴¹ In fact, they are likely to increase the tax base because their rental value represents extra revenue.⁴²

39. H. AARON, *supra* note 16, at 61. Commercial property, in turn, bore a ratio 60% greater than that of multi-family residences. The study presented data for 25 of the largest United States cities. In only six cities were assessment ratios higher for single-family homes than for apartment houses, with the greatest differential being only 22 percentage points. *See id.* at 60. In Washington, D.C., the ratio on single-family homes was 98% of the average assessment ratio for all D.C. properties; apartments, 112% of the average; and commercial-industrial properties, 92% of the average. *Id.*

A study of New York City showed that assessed values of single-family homes and duplexes were less than 50% of full market value, and apartment structures were assessed at 70% to 80% of actual value. *See Kee & Moan, The Property Tax and Tenant Equality*, 89 HARV. L. REV. 531, 534 (1976). Similarly, a HUD study in 10 urban areas concluded that low-income tenants in blighted neighborhoods sustaining poor quality housing paid property taxes "at a substantially higher rate" than residents in other neighborhoods. The discrepancy was due "entirely to differential assessment/market value ratios." *See Currier, supra* note 15, at 59.

40. One could speculate that the need to have current income figures to appraise apartments leads assessors to reappraise apartments more often than single-family homes, thus more immediately attributing to them any appreciation in the real estate market. Alternatively, amid the recent political clamor over property taxes, assessors may perceive that taxes overburden homeowners, and thus assessors may be either more critical or more prompt in appraising apartments. *See Homeowners Brew a Revolt*, BUS. WEEK, March 28, 1977, at 20-21 [hereinafter cited as *Homeowners Revolt*].

In addition, discretionary standards permit assessors to intentionally abuse their discretion, for example, by favoring industries in order to attract good tax ratables, by favoring single-family homes in order to equalize a perceived inequitable tax burden, or by favoring "more desirable" homeowners over "less desirable" tenants. H. AARON, *supra* note 16, at 59; Zimmerman, *supra* note 20, at 659 & n.56; cf. Black, *The Nature and Extent of Effective Property Tax Rate Variation Within the City of Boston*, 25 NAT'L TAX J. 203, 209 (1972) (because of inequities in assessment, effective tax rate positively related to number of units, density of nonwhite population, and degree of physical deterioration in the area; negatively related to family income). *See also* Babcock & Bosselman, *supra* note 37, at 1068-71 (tenants traditionally specified as undesirable citizens).

41. This is one excuse that a community may use to support its exclusion of apartment dwellers. *See* notes 97-114 & accompanying text *infra*. For an account of homeowners' historical prejudice against apartments, and of various excuses that suburbanites make to exclude apartments from their communities, *see* Babcock & Bosselman, *supra* note 37, at 1040-49, 1059-72.

42. *See* Babcock & Bosselman, *supra* note 37, at 1062-65 (analysis of fallacies of argument that apartments do not pay their own way); Miller & Tabb, *A New Look at a Pure Theory of Local Expenditures*, 26 NAT'L TAX J. 161, 170 (1973) (communities with eroding tax base should encourage construction of high rises and luxury apartments); cf. Williams & Wacks, *Segregation of Residential Areas along Economic Lines: Lionshead Lake Revisited*, 1969 WIS. L. REV. 827, 843 (garden apartments with few bedrooms provide good tax ratables).

In one respect, homeowners do incur higher property taxes at the time that apartment buildings enter their community. Because assessors must appraise property according to its "highest and best use," *see* note 27 & accompanying text *supra*, they will assess land currently supporting single-family homes for its new ability to more profitably support a commercial building. The taxes increase not because apartments themselves do not support the tax base, but rather because homes on the

2. Incidence of the property tax

Establishing that apartment buildings have a higher actual market value and have a higher assessment/fair market value ratio than do owner-occupied homes is only the first step in demonstrating tenants' property tax burdens. Property taxes are billed directly to owners of the buildings;⁴³ therefore, the second step is to demonstrate that tenants bear the economic incidence⁴⁴ of the tax.

Economic incidence theory presupposes that when owners lease property, they have the opportunity to shift some or all of the tax to tenants by raising rents to include as much of their own tax costs as the rental market will bear.⁴⁵ Traditionally, economists thought that the market caused owners to pay taxes on land, while tenants bore taxes on improvements.⁴⁶ Recent studies verify the shift to tenants of at least improvement taxes,⁴⁷ but because of incomplete research, economists still debate the extent of the shift in land taxes.⁴⁸

urban fringe are built upon rapidly appreciating property. Cf. Zimmerman, *supra* note 20, at 652-55 (rising taxes on farmland in the path of urban growth). Some states provide relief from this phenomenon for agricultural and open space lands. See, e.g., DEL. CODE tit. 9, §§ 8328-8335 (1975); note 20 *supra*.

43. See note 23 *supra*.

44. Economic incidence in this context connotes the proportional tax burdens on landlords and tenants. It "is measured by the reduction in real incomes that results from the imposition of [a] tax." J. PECHMAN & B. OKNER, WHO BEARS THE TAX BURDEN? 3 (1974). It should be distinguished from legal incidence. See note 67 *infra*..

45. Currier, *supra* note 15, at 46. Commercial tenants can shift the tax to customers as a cost of the purchased product. Residential tenants are the final recipients of the tax shift and have no alternative but to pay it.

Owners who cannot shift taxes to tenants must capitalize them into the value of their property, thus reducing its fair market value. For a complete discussion of tax shifting, tax capitalization, and land use planning, see *id.* at 44-62. See also H. AARON, *supra* note 16, at 42; J. PECHMAN & B. OKNER, *supra* note 44, at 27-29.

46. Currier, *supra* note 15, at 51; Orr, *The Incidence of Differential Property Taxes on Urban Housing*, 21 NAT'L TAX J. 253, 253 (1968) [hereinafter cited as *Differential Property Taxes*].

Aaron has explained that the difference in the theories regarding land and structure components is due to the traditional view that land supply was fixed, while the supply of structures was not. "Because structures must be renewed periodically, the property tax they bear . . . is not capitalized. The price of structures, exclusive of taxes, is determined, rather, by construction and maintenance costs. Furthermore, the tax is simply an element of the gross cost of the structures to users." H. AARON, *supra* note 16, at 24. Some commentators indicate that interest expenses also are passed through. E.g., Freeman, *The Tenant Tax Act: Extending the Federal Real Estate Tax Deduction to Residential Tenants*, 13 HARV. J. LEGIS. 298, 299 (1976) [hereinafter cited as *The Tenant Tax Act*].

47. One major study set out to test the traditional incidence theory with respect to improvements in urban property. In 1968, Orr related rent differentials to property tax differentials among metropolitan Boston communities containing similar housing. He concluded that property owners, rather than tenants, bore a substantial portion of the interjurisdictional tax differential. *Differential Property*

Apparently few studies have been made on tax shifting with respect to urban land that bears apartments.⁴⁹ It can be reasonably argued, even without direct empirical support, that the traditional incidence theory does not apply to most apartment complexes⁵⁰ because the theory was developed to apply to an agrarian society.⁵¹ In an urban market, where many owners lease their property, owners are able to pass through land taxes while still maintaining competitive rents. Studies demonstrate that commercial users pass through to their customers almost all income and profit taxes.⁵² Since the urban housing market is commercial, these studies could be extrapolated to imply that apartment owners can pass through their land taxes as well.

Taxes, *supra* note 46, at 254, 262. He was careful to caution, however, that "[i]t may, of course, still be the case that the portion of the tax which is common to all taxing jurisdictions is shifted forward to tenants." *Id.* at 261; cf. Black, *The Incidence of Differential Property Taxes on Urban Housing: Some Further Evidence*, 27 NAT'L TAX J. 367 (1974) (shifting of interjurisdictional tax differential slightly greater).

Hyman and Pasour applied Orr's techniques to a fairly elastic housing market in North Carolina and found, contrary to Orr, that taxes on improvements were shifted substantially to tenants. Hyman & Pasour, *Property Tax Differentials and Residential Rents in North Carolina*, 26 NAT'L TAX J. 303, 306 (1973). For a rental unit valued at \$15,000, a \$.10 tax increase caused an annual tax liability increase of \$15, \$9 of which was shifted forward to the tenant. *Id.* at 305.

Subsequent studies have criticized Orr's results even with respect to tax differentials. Coen & Powell, *Theory and Measurement of the Incidence of Differential Property Taxes on Rental Housing*, 25 NAT'L TAX J. 211 (1972); Heinberg & Oates, *The Incidence of Differential Taxes on Rental Housing: A Comment and Some Further Evidence*, 23 NAT'L TAX J. 92 (1970) (Orr's methodology was erroneous in not restricting his data to multi-family dwellings); Heinberg & Oates, *The Incidence of Differential Property Taxes on Rental Housing: An Addendum*, 25 NAT'L TAX J. 221 (1972). *But see* H. AARON, *supra* note 16 (economic incidence follows owners, assuming supply market of both land and structures is not fixed); Orr, *The Incidence of Differential Property Taxes on Urban Housing: Reply*, 25 NAT'L TAX J. 217 (1972) (response to Coen and Powell).

48. E.g., H. AARON, *supra* note 16, at 18-20; Black, *supra* note 47, at 367.

49. Cf. articles cited at note 47 *supra*. Honolulu and Pittsburgh, however, present promising sites for new empirical analysis of land tax shifting. In 1925, Pittsburgh established a "graded tax" which taxed land at twice the rate of improvements. Honolulu has a similar, more recent system. Currier, *supra* note 15, at 58-59. By assigning a coefficient of two to changes in land taxes and a coefficient of one to changes in structure taxes, the graded tax can readily reflect how much of each change accounts for rent increases.

50. See Black, *supra* note 47, at 367 (following Orr's methodology) (shifting of tax differentials to tenants slightly greater in Boston urban community than in larger metropolitan Boston). One study done from 1919 to 1924 found strong evidence of capitalization in agricultural land. Another study done from 1951 to 1957 found little evidence of tax capitalization in both rural and urban land values. *Differential Property Taxes*, *supra* note 46, at 254 & nn.5-6.

51. Currier, *supra* note 15, at 51; see H. AARON, *supra* note 16, at 1-2.

52. Currier, *supra* note 15, at 53 n.115 (citing Mieszkowski, *Tax Incidence Theory: The Effects of Taxes on the Distribution of Income*, 7 J. ECON. LIT. 1103 (1969)). Currier himself indicates that, absent some reason to believe that property and profit taxes are treated alike by the taxpayer, "little can be said about the extent of tax shifting, if any" by commercial users. *Id.* at 53. Pending further study, however, one may presume the converse, for presumably businesses are able to shift taxes as they would pass through any other cost.

Even under traditional incidence assumptions, given the density of apartments, and that a large part of an apartments' assessed value represents improvements rather than land, a significant percentage of a tenant's rent goes toward property taxes. Approaching the question only nominally, without quantifying the percentage passthrough on improvements and land taxes, some commentators have concluded that up to twenty-five cents of each rental dollar represents property taxes.⁵³ Courts have recognized a passthrough,⁵⁴ and tax relief legislation typically presumes that passed-through taxes account for twenty-five percent of monthly rent.⁵⁵

3. Cumulative effect of all taxes upon tenants

There are two standards against which to evaluate the property tax: whether it is adequately progressive, or at least proportional,⁵⁶ and whether it properly allocates costs of community services according to consumption. The two standards are not necessarily compatible.⁵⁷ This

53. As of 1959, property taxes accounted for \$.21 of every rental dollar for well maintained urban rental structures, and \$.15 for poorly maintained units. Alpert, *Property Tax Abatement: An Incentive for Low Income Housing*, 11 HARV. J. LEGIS. 1 n.3 (1973). More recent studies confirm that 20% to 25% of rent is devoted to property tax, with the proportion higher in some jurisdictions. See *The Tenant Tax Act*, *supra* note 46, at 300.

54. In *Phoenix v. Kolokziejski*, 399 U.S. 204 (1970), involving general obligation bonds, the Supreme Court held that all residents, regardless of their property ownership, have like substantial interests in municipal services and in the manner in which they are financed. *Id.* at 212-13. Most importantly, the Court noted that

[p]roperty taxes may be paid initially by property owners, but a significant part of the ultimate burden of each year's tax on rental property will very likely be borne by the tenant rather than the landlord since . . . the landlord will treat the property tax as a business expense and normally will be able to pass all or a large part of this cost on to the tenants in the form of higher rent.

Id. at 210 (emphasis supplied, footnote omitted). *Accord*, *South Nashville St. Ry. Co. v. Morrow*, 87 Tenn. 406, 408, 11 S.W. 348, 350 (1889) (dictum) ("the greater part of a tax assessed against a landlord finally falls upon his tenant").

55. *E.g.*, ARIZ. REV. STAT. § 43-128.01 (Supp. 1975) (25% presumed to be taxes for purposes of low-income tax relief for elderly). See generally Kee & Moan, *supra* note 39, at 533 n.11 and statutes cited therein; notes 123-24 & accompanying text *infra*. By defining rent to include "any payment required to be made by the tenant on behalf of his landlord for real estate taxes or any other expense," even the language of Prince George's County's renters' tax ordinance implicitly recognizes the passthrough. PRINCE GEORGE'S COUNTY, MD., CODE § 75-7(i) (1976). Cf. Kee & Moan, *supra* note 39, at 543 (New York City commission presumed 25% passthrough).

56. "A tax is *regressive* when the ratio of tax to income falls as incomes rise; a tax is *proportional* when the ratio of tax to income is the same for all income classes; and a tax is *progressive* when the ratio of tax to income rises as incomes rise." J. PECHMAN & B. OKNER, *supra* note 44, at 1 n.2 (emphasis supplied).

57. The conflict between the two goals, tax progressivity and cost allocation, is commonly recognized. See, *e.g.*, Miller & Tabb, *supra* note 42, at 172-73; Zimmerman, *supra* note 20, at 668, 676.

section discusses the progressivity of the property tax taken alone, as well as in combination with other taxes.

Most experts assume that the property tax is regressive.⁵⁸ Even under unusual incidence assumptions, which favor a finding of progressivity, one economist has concluded that the tax is slightly regressive within the group of renters, although it may be slightly progressive among homeowners.⁵⁹

It is more difficult to determine the regressivity of property taxes among a group that includes both homeowners and tenants,⁶⁰ but it is certain that "due to structural features of the United States tax system . . . homeowners pay lower taxes than do renters."⁶¹ To be consistent

58. E.g., Rothenberg, *supra* note 16, at 178; Shannon, *Residential Property Tax Relief—A Federal Responsibility?*, 26 NAT'L TAX J. 499, 500 (1973); Zimmerman, *supra* note 20, at 647. *But cf.*, Freeman, *Tax Relief for the Homeowner?*, 26 NAT'L TAX J. 485, 487-88 (1973) [hereinafter cited as *Tax Relief for the Homeowner*] (regressivity really caused by disparate income tax treatment); Netzer, *The Incidence of the Property Tax Revisited*, 26 NAT'L TAX J. 515 (1973) (property tax really progressive among homeowners).

59. H. AARON, *supra* note 16, at 38. *Accord*, Netzer, *supra* note 58.

60. The problems inherent in quantifying the passthrough of property tax from owners to tenants may account in part for the dearth of research in this area. One study indicates that real estate taxes are borne approximately equally by homeowners and tenants. D. NETZER, *IMPACT OF THE PROPERTY TAX: ITS ECONOMIC IMPLICATIONS FOR URBAN PROBLEMS* 17, *cited in The Tenant Tax Act*, *supra* note 46, at 300 n.9.

In a second study, Pechman and Okner made two sets of incidence assumptions, and measured which of various classes of individuals bore the heaviest burden with respect to income for a variety of taxes. In variant 1c, they assumed that tax incidence followed ownership of capital. J. PECHMAN & B. OKNER, *supra* note 44, at 38. In variant 3b, the variant more similar to the classical incidence theory, they assumed that property tax on improvements shifted to consumers, and that all of the land tax remained with owners. *Id.* at 39. Under incidence variant 3b, they found that the effective property tax rate for homeowners, "computed by expressing taxes paid as a percentage of income," was 3.6%, and the effective rate for renters was 2.8%. Under variant 1c, the homeowners' rate was 3.4% and the renters', 1.9%. *Id.* at 18, 72.

Tenants bear a heavier burden than Pechman and Okner demonstrated through their variant 3b if the incidence assumptions indicated in this comment are correct. The assumptions in variant 3b are more accurate than those in 1c, because there is authority that some of the land taxes shift. *See* notes 45-55 & accompanying text *supra*.

When they classified their data by income rather than by lifestyle, Pechman and Okner found that "under variant 3b . . . effective state and local tax rates start at 1 percent for families at the bottom of the income scale and decline steadily as income rises . . . to only 4 percent of income." *Id.* at 63. The income results are consistent with the lifestyle results, since tenants typically have lower incomes than do homeowners. For example, Census Bureau statistics for 1970 demonstrate that in New York City only 19% of the families with incomes below \$7,000 owned their own homes, while 57% of those whose annual incomes fell between \$7,000 and \$15,000 owned their own homes. Kee & Moan, *supra* note 39, at 532 n.6. The median income of the city's 2.5 million renters was \$7,300; that of the 1.5 million homeowners was \$13,000. *Id.* at 547 n.87 (citing [1970] U.S. BUREAU OF THE CENSUS, DEP'T OF COMMERCE CENSUS OF POPULATION AND HOUSING *passim*).

61. J. PECHMAN & B. OKNER, *supra* note 44, at 10. Under their incidence assumptions, *see* note 60 *supra*, renters paid slightly lower property taxes, and homeowners paid lower individual income, payroll, and consumption taxes. On balance, the homeowners won, especially under variant

with the notion of horizontal equity,⁶² the federal income tax system should burden equally a particular tenant and a particular homeowner who earn identical incomes.⁶³ Instead, homeowners pay less federal income tax than do identically situated tenants.⁶⁴

The Internal Revenue Code does not require taxpayers residing in homes they own to impute into their taxable income the rental value of their homes.⁶⁵ Moreover, homeowners can deduct all local property taxes,⁶⁶ but tenants may not deduct taxes passed on to them because the legal incidence of the tax remains upon the owner.⁶⁷ Homeowners may

3b. *Id.* at 74. As indicated above, Pechman and Okner might alter their incidence assumptions were they treating exclusively the urban/suburban apartment market. See notes 50, 60 *supra*. With a greater passthrough of property tax, the total burden on tenants would increase.

62. Horizontal equity has popularly been used in describing the income tax—that those with equal income, all other factors being equal, pay equivalent tax bills.

63. *The Tenant Tax Act*, *supra* note 46, at 299. An evaluation of horizontal equity in real property taxes alone is impossible, of course, because tenants and homeowners do not occupy identical positions with respect to property. In order to make some judgment of property tax treatment of similarly situated taxpayers, one would have to quantify such intangibles as the value of taxpayers' respective contributions to community services, the amount of services they consume, and the value to the homeowner of this equity interest in his property and his ability to recover taxes paid upon the sale of his home.

A similar notion of equality, however, can be pursued by examining the respective tax burdens of homeowners and tenants who are similarly situated with respect to income. See J. PECHMAN & B. OKNER, *supra* note 44, at 1.

64. *The Tenant Tax Act*, *supra* note 46, at 299. Freeman presents exemplary tax returns for a renter and a homeowner, each with an earned income of \$10,000. The renter pays \$1,304 in federal income taxes, while the homeowner pays \$962. *Id.* at 299 n.6; *accord*, Kee & Moan, *supra* note 39, at 535 n.22 (renter pays \$1,770.50, owner pays \$1,512.00).

65. Kee & Moan, *supra* note 39, at 534. See *Helvering v. Independent Life Ins. Co.*, 292 U.S. 371, 379 (1934) (rental value of owner-occupied building not income within meaning of sixteenth amendment). This failure to recognize income is one of the most frequently cited tax inequities between tenants and homeowners. *E.g.*, *The Tenant Tax Act*, *supra* note 46, at 301-02; Heller, *supra* note 23, at 757-59; Kee & Moan, *supra* note 39, at 534; Maxwell, *Income Tax Discrimination Against the Renter*, 26 NAT'L TAX J. 491, 491 (1973).

Proposals to include imputed rental income under I.R.C. § 61(a) have failed because of the administrative hurdles involved, and because the taxpayer never realizes such income. He emerges from the "transaction" without additional cash with which to pay his taxes. *Cf. Eisner v. Macomber*, 252 U.S. 189 (1920) (stock dividend is not income because of the requirement of realization). See generally B. BITTKER & L. STONE, *FEDERAL INCOME, ESTATE AND GIFT TAXATION* 62-65 (1972) (quoting W. VICKREY, *AGENDA FOR PROGRESSIVE TAXATION* (1947)).

66. I.R.C. § 164(a)(1). The deduction is limited by I.R.C. § 164(c) (taxes assessed against local benefits that tend to increase value of property) and § 275(a)(5) (taxes required to be imposed on purchaser of land by virtue of § 164(d)).

67. Treas. Reg. § 1.164-1 (1957); Rev. Rul. 301, 1975-2 C.B. 66 (tax increase not deductible by tenant although ordinance required that it be passed through). Ironically, landlords may deduct the entire tax, although its economic incidence actually falls upon the tenant.

There are four requirements for a § 164(a)(1) deduction: (1) the tax must be assessed at one rate, by proper taxing authorities, against all real property within the jurisdiction, and for the general public welfare; (2) the levy must be on an interest in real property rather than in personal or intangible property; (3) the tax must be imposed on the taxpayer claiming the deduction; and (4) payment must be made directly to the taxing jurisdiction. Tenants, as taxpayers who are not directly and

deduct mortgage interest payments⁶⁸ and may take advantage of various other tax benefits, including the limited nonrecognition of capital gain upon the sale of a home,⁶⁹ and the exclusion from income of proceeds from the sale of a residence by a taxpayer over sixty-five years old.⁷⁰ Taxpayers who rent their residences can take advantage of no comparable tax breaks.⁷¹

Moreover, tenants accumulate no equity; their "investment" disappears. In contrast, homeowners, while reducing income taxes by deducting property taxes and mortgage interest payments, purchase interests which they can sell later. If they realize gain on the sale, they may pay taxes at the preferred capital gains rate,⁷² and if they lose money on the sale, they can reduce income tax further by recognizing the loss.⁷³

personally liable to the taxing authority, and who do not own some property interest that may be foreclosed, may not deduct the tax because of the third and fourth requirements. *The Tenant Tax Act*, *supra* note 46, at 310-27.

Under certain statutes, tenants may deduct real property taxes actually paid if they have registered as co-assesseees. Rev. Rul. 84, 1968-1 C.B. 71. *See* note 23 *supra*. *See also* Rev. Rul. 327, 1964-2 C.B. 56 (lessees for over 15 years who are liable for tax under Hawaii law may deduct it).

68. I.R.C. § 163(a).

69. I.R.C. § 1034(a) (new residence purchased within 18 months); § 44 (credit of either 5% of purchase price of new principal residence or \$2,000, if residence acquired before January 1, 1977, or certain other dates).

70. I.R.C. § 121 (exclusion prorated after sales price exceeds \$35,000).

71. By comparison, under I.R.C. § 216, condominium and cooperative apartment owners qualify for the property and interest deduction of I.R.C. §§ 163(a), 164(a)(1). They also qualify for preferential tax treatment under I.R.C. § 1034 (roll-over provision for sale of residence). § 44 (purchase of new residence), and § 121 (exclusion of proceeds of sale by senior citizen). The provisions act as an incentive for private ownership of land. By not including rental property, however, the provisions do not recognize that the apartment building may be privately owned in any case. The commercial lessee also is in a different position than the residential tenant. He is able to deduct his entire rent as a business expense. *See* I.R.C. §§ 162(a)(3), 212.

It may be argued that tenants and low-income citizens receive special recognition under the investment incentive provisions for low-income housing. I.R.C. § 167(k) (expenditures to rehabilitate low-income housing depreciated over five years), § 1039 (nonrecognition of capital gain upon qualified sales of low-income housing), § 1250(a)(1) (special rules limiting recapture of additional depreciation). These provisions, however, do not aid middle-income tenants. In addition, in a market in which supply is constant and demand is inelastic, the landlord retains the entire subsidy; none inures to the benefit of the tenant through reduced rents. Rolph, *Discriminating Effects of the Income Tax Treatment of Owner-Occupants*, 26 NAT'L TAX J. 471, 474-76 (1973).

72. I.R.C. § 1202 (taxpayer pays tax on 50% of his net capital gain).

73. By enacting these capital gains provisions, Congress apparently intended to encourage private ownership of homes. Because of low incomes, however, many tenants are unable to purchase homes. *See* note 60 *supra*. In 1970, 37% of the United States population rented their homes. *The Tenant Tax Act*, *supra* note 46, at 302 n.16 (citing U.S. BUREAU OF THE CENSUS, DEP'T OF COMMERCE, STATISTICAL ABSTRACT OF THE UNITED STATES 700 (95th annual ed. 1974)). Rapid urban population growth, skyrocketing land values, and urban sprawl, make it likely that this percentage will grow.

Congressional policy of encouraging private ownership of homes clashes with a major purpose of a progressive income tax system: to redistribute wealth. *Cf.* Harmelink & Krause, *Reduction of Tax*

State taxes fail to alleviate the prejudicial effects on tenants resulting from the federal income tax.⁷⁴ Because tenants do not own property of record, most states fail to consider them in drafting tax relief legislation. For example, several states enacted homestead exemptions to grant property tax relief to certain low-income, elderly, disabled, or widowed homeowners.⁷⁵ Only a few states incorporated rent rebates for low-income tenants into their homestead exemptions.⁷⁶ Finally, the long run market effect of the disproportionalities in federal, state, and local taxes may further disadvantage tenants. The tax benefits accruing to homeowners⁷⁷ encourage the overconsumption of single family dwellings, which in turn shortens the supply of land available for apartments. The shortened supply forces an increase in prices, and tenants pay greater rents than they would without the federal tax provisions.⁷⁸

The Prince George's County renters' tax exacerbated rather than relieved tenants' problems.⁷⁹ Tenants were prejudiced by the extra tax

Inequity to Renters of Dwellings: A Recommendation, 51 TAXES 204, 205 n.6 (1973) (current system penalizes renters for simple choice of lifestyle). Indeed, some commentators have questioned whether the federal tax incentives have had any significant effect on private investment in land. *The Tenant Tax Act*, *supra* note 46, at 302. See also Chapman, *Real Estate Tax Incentives*, 26 NAT'L TAX J. 389 (1973); McDaniel, *Tax Shelters and Tax Policy*, 26 NAT'L TAX J. 353, 367-73 (1973).

74. In notable exception, Hawaii allows a lessee under a five-year lease to deduct real property taxes. HAW. REV. STAT. § 246-27 (Supp. 1975). State income taxes closely resemble the federal system. H. AARON, *supra* note 16, at 13-14; Kee & Moan, *supra* note 39, at 538 n.33; e.g., N.Y. TAX LAW §§ 359-385 (McKinney 1975).

75. E.g., FLA. STAT. ANN. § 196.031 (1972) (individuals who are long-term owners of homesteads, condominiums, and cooperative apartments and who are at least 65 years of age receive additional \$5,000 homestead exemption); see Zimmerman, *supra* note 20, at 663-65 ("most of these exemptions are more or less random, having arisen out of a legislative response to a particular problem or a *cause célèbre*"); cf. HAW. REV. STAT. §§ 246-26 to -27 (Supp. 1975) (exemptions up to \$20,000 for principal residence, including condominiums and cooperatives; residential leases for five or more years entitled to homestead status).

76. E.g., CONN. GEN. STAT. § 8-215 (1977) (abatement on low- and middle-income housing for purpose of reducing rent, effecting occupancy, or providing facilities or services, pursuant to contract with owner prescribing use of abated funds). See generally McDaniel, *supra* note 73; Rolph, *supra* note 71.

77. One commentator has defined the private gain on which taxes are saved as $G = V - T$, where V is the value-added of the dwelling and T is the property tax liability in a given year (that portion of the value-added which must be committed to public benefit). V can be further defined as $V = R - E$, where R represents imputed gross rental and E is the expense of maintaining, insuring, and operating, plus depreciation. Rolph, *supra* note 71, at 471-72.

78. *Id.* at 479. See generally P. SAMUELSON, *ECONOMICS* 62-65 (7th ed. 1967). The tax incentive for investment in low-income housing may offset this effect to some degree. I.R.C. §§ 167(c), 1039, 1250(a)(1)(C). These tax benefits, however, accrue to the landlord. See note 71 *supra*.

79. Since this tax and others may harm tenants, litigators may seek judicial avenues to invalidate the tax. Aside from an allegation that the tax is *ultra vires*, or not properly authorized by the state legislature, the strongest attack which a litigator might make is to show that the measure is a property tax rather than an excise, see notes 154-79 & accompanying text *infra*, and therefore invalid as contrary to *ad valorem* requirements. See *Beeland Wholesale Co. v. Kaufman*, 234 Ala. 249, 174

liability.⁸⁰ Additionally, the Internal Revenue Service has ruled that, for two reasons, tenants could not deduct the amount paid in renters' taxes from their income for federal income tax purposes. First, it was not a real property tax within the contemplation of I.R.C. § 164(a)(1), because tenants were personally liable for the renters' tax.⁸¹ Second, since the tax was imposed neither by the state, nor upon a broad range of classes of items, it was not deductible as a sales tax under I.R.C. § 164(a)(4).⁸²

The renters' tax also levied a tax on a tax. Approximately twenty-five percent of the rent pays the property tax;⁸³ therefore, one-fourth of the renters' tax was based upon property taxes already paid. Thus, the renters' tax not only charged taxpayers twice for the privilege of living within the jurisdiction⁸⁴ but also measured the second tax, in part, by the quantity of the first tax.

So. 516 (1937) (except for due process or equal protection claims, restrictions on legislative power to tax extend only to property tax); *Hunt v. Callaghan*, 32 Ariz. 235, 257 P. 648 (1927) (constitutional requirement of stated purpose applicable only to property, not excise tax). *But see* *Weaver v. Prince George's County*, 281 Md. 349, 379 A.2d 399 (1977) (renters' tax was an excise not subject to ad valorem requirements). A more interesting and unique issue is whether the measure is an improper exercise of the taxing power or an invalid use of police power. *See* notes 195-200 & accompanying text *infra*.

Plaintiffs could attempt to attack the renters' tax as discriminatory under the uniformity clause of the state constitution. *See* notes 21-22 & accompanying text *supra*. An attempt to overturn a tax on equal protection grounds probably would fail. *See* *Lehnhauser v. Lake Shore Auto Parts Co.*, 410 U.S. 356, 359 (1973) ('[w]here taxation is concerned and no specific federal right is imperiled, apart from equal protection, the States have large leeway in making classifications and drawing lines which in their judgment produce reasonable systems of taxation'); *McCray v. United States*, 195 U.S. 27 (1904) (tax on oleomargarine upheld; judicial review only of power used to tax). The possibility of triggering heightened judicial scrutiny by showing either a discriminatory impact on a suspect classification or a violation of a fundamental right is unlikely in light of recent Supreme Court cases. *E.g.*, *Village of Arlington Heights v. Metropolitan Hous. Dev. Corp.*, 429 U.S. 252, 270 n.21 (1977) (plaintiff must show discriminatory purpose at best; dictum that plaintiff also must demonstrate discriminatory impact in fact); *cf.* notes 204-13 & accompanying text *infra*. *See also* *Washington v. Davis*, 426 U.S. 229 (1976) (written test to qualify for training as police officer not racially biased without showing of discriminatory purpose); *San Antonio Independent Free School Dist. v. Rodriguez*, 411 U.S. 1 (1973) (under rational relationship test, school financing system not unconstitutionally discriminatory with respect to wealth, although admittedly imperfect).

80. Taxed at 4% of monthly rent, tenants would pay \$96 per year on an apartment renting for \$200 a month; \$120 per year on a \$250 apartment; and \$168 per year for a \$350 apartment.

81. Rev. Rul. 558, 1975-2 C.B. 67; *cf.* note 67 *supra* (incidence requirements for deduction of real property tax paid). The ruling against the measure's property tax status relied upon a former ruling and a tax court case considering the nature of the British "rates" tax. *See* note 26 *supra*. Although tenants were personally liable for nonpayment, their liability was not enforceable by the county. Rather, the tax was assessed against the landlord who collected from the tenant; upon nonpayment by the tenant, the landlord could institute an action for nonpayment of rent. *See* note 2 *supra*.

82. Rev. Rul. 558, 1975-2 C.B. 67, 68.

83. *See* notes 53-55 & accompanying text *supra*.

84. If the renters' tax were construed as a property tax, its imposition might involve double taxation because not all those who pay initial property tax must also pay renters' tax. *See* *Cook v.*

4. *Allocating costs of community services*

The effectiveness of local property tax systems can be evaluated not only in terms of progressivity, but also in terms of the efficient allocation of the cost of community services. Revenue from real property taxes helps to pay for the operation of community services such as garbage and sewage disposal, street maintenance, public transportation, schools, public health care facilities, and government administration. If the costs of these services were perfectly allocated among users, the taxes that each resident paid would exactly offset the cost of services he consumed.

It is commonly assumed that the revenue from apartment buildings does not equal the dollar amount that the residents consume in services either because apartments house a great number of school-aged children, or because the high density of the buildings requires greater sewage, fire, and police services.⁸⁵ Homeowners who see their tax bills rise⁸⁶ may point to apartment dwellers as the sole cause of the increase, and accuse them of not bearing their share of municipal costs.

Tenants pay a substantial amount of tax. In addition, as community benefits increase, tenants are likely to pay more taxes. As in the case of passing through tax costs, when an owner leases property, he can pass through to tenants the value of the benefits, and thereby secure higher rental income.⁸⁷ Passing through the value of benefits increases the assessed value of the apartment as determined by capitalization of income. This increase means a higher tax bill and, in turn, some additional increase in rent as the owner passes through the additional tax.⁸⁸

A comprehensive field study performed in a variety of New Jersey communities⁸⁹ demonstrated that, for whatever reason, each class of

City of Burlington, 59 Iowa 251, 13 N.W. 113 (1882) (taxing same tract of land twice would be double taxation, but this tax upheld because tax on corporation's property reduces income and therefore reduces value of stock, which also is taxed); *Independent School Dist. v. Iowa Employment Sec. Comm'n*, 237 Iowa 1301, 25 N.W.2d 491 (1946) (if second tax is levied on all property subject to the first tax, it is simply an increase in tax rate, and not double taxation). See generally Heyman & Gilhool, *supra* note 7, at 1153.

85. But see Zimmerman, *supra* note 20, at 676 (while both objectives are present, most taxes in practice approach the cost allocation goal).

86. The New York City property tax rate has increased 48% in the last six years. Kee & Moan, *supra* note 39, at 531. See also *Homeowners Revolt*, *supra* note 40, *passim*.

87. This "benefit capitalization" reflects the expenditure of tax revenues, and the degree to which it offsets tax capitalization depends in large measure on "how specifically the service paid for by the tax benefits the owner *qua* owner." Currier, *supra* note 15, at 55.

88. There comes a point, of course, when the owner finds it no longer advantageous to pass through benefits, because the market will not bear any more tax. Apparently, no studies have defined that equilibrium point in a given market, nor have any studies determined the amount, at equilibrium, of rent increases that are caused by benefit passthroughs and those that are caused by tax passthroughs.

89. G. STERNLIEB, *HOUSING DEVELOPMENT AND MUNICIPAL COSTS* (1973) (study per-

multi-family uses as a whole pays *more* in taxes than it consumes in services.⁹⁰ The study examined the effect on municipal budgets—both educational and operational—caused by various styles of residential uses.⁹¹ After analyzing per pupil educational costs and per person noneducational municipal costs, and applying proper factors to each cost for the average number of persons per residential unit,⁹² the researchers concluded that single-family homes returned in taxes a smaller percentage of their service cost than did rental residential uses.⁹³ In fact, in two representative communities having different types of tax bases, property

formed for the Center for Urban Policy Research) [hereinafter cited as CUPR STUDY]. The authors designed a methodology and made findings that can be applied readily to other states. *Id.* at 2. *See* NEW JERSEY COUNTY AND MUNICIPAL GOVERNMENT STUDY COMM'N, HOUSING & SUBURBS: SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS 4, 7 ("most multifamily dwellings are fiscally more advantageous . . . than are all but the most expensive single family housing developments").

90. A subsidiary question is whether there exist large enough tax and benefit passthroughs such that each *tenant* in the apartment pays in taxes what he consumes in services. Because of the double passthrough involved, the efficiency of allocation to individual tenants would be most difficult to quantify.

91. Data covered single-family homes, townhouses, highrise apartments, and garden apartments. CUPR STUDY, *supra* note 89, *passim*.

92. For example, the study presented the following data for two-bedroom garden apartments:

Cost Revenue Analysis*

General Parameters:

- A. Rent: \$275/month
- B. Average school-age children per unit: ** .344
- C. Average residents per unit: ** 2.805
- D. Market value approximately 6 times annual rent role:
 $\$275 \times 12 \times 6 = \$19,800$

Educational Cost = (.344 pupils) (\$948.12/pupil)	=	\$326.15
Municipal Cost = (2.805 persons) (\$5.30/person)	=	17.67
County Cost = (2.805 persons) (\$62.27/person)	=	174.67
Deductions = (2.805 persons) (\$3.38/person)	=	<u>9.48</u>
<i>Total Property Tax Cost</i>		\$527.97

Revenue = (Market Valuation/Dwelling) (Equalized Property Tax Rate)		
Revenue = (\$19,800) (.04277)	=	846.85
<i>Total Revenue</i>	=	846.85
<i>Total Surplus</i>		
846.85 - 527.97	=	318.88

* Adopted from CUPR STUDY, *supra* note 89, at 46.

** See Table 3, cols. (a) and (d), *infra* (showing average number of individuals for each type of residential use).

93. The revenue surplus, computed in identical manner for all varieties of residential uses, was as follows:

taxes on four-bedroom single-family homes actually yielded deficits when offset against allocated service costs.⁹⁴ Given these figures, it seems likely that a tax system, that would give tenants fairer treatment than they now receive, could be devised on the basis of cost allocation.⁹⁵ If con-

Revenue Surplus Per Dwelling Unit*

Housing Type	Community A**	Community B***
Single-Family Home		
3-bedroom	\$ 391.13	\$ 355.67
4-bedroom	- 227.44	- 1,136.17
Townhouse		
2-bedroom	1,087.98	412.94
3-bedroom	782.47	- 78.41
Highrise Apartment		
1-bedroom	986.25	779.01
2-bedroom	1,086.73	417.72
Garden Apartment		
1-bedroom	510.75	200.51
2-bedroom	318.88	- 152.93

* CUPR STUDY, *supra* note 89, at 295.

** Manalapan, N.J., is completely residential.

*** Edison, N.J., has a strong commercial and industrial base; consequently, the property tax rate is lower than that of Manalapan.

94. *Id.* In the table above, even in the community showing more deficit uses, single-family homes had the largest deficit.

95. The CUPR figures do not represent startup costs, those capital outlays necessary to expand community facilities like schools and roads in the face of increasing population. See generally CUPR STUDY, *supra* note 89, at 129 (startup costs large for communities just beginning their growth); Heyman & Gilhool, *supra* note 7, at 1120 (distinguishing services costs from new capital outlays). There is some indication that in newly developing communities, where startup costs are significant, tenants do not pay their "share," while in older communities where capital structures already exist, the extra burden imposed by new apartments is so insignificant that capital costs merge with service costs and tenants contribute significantly. See CUPR STUDY, *supra* note 89, at 129-36.

For two reasons, communities should avoid allocating startup costs through taxes. First, in our industrialized society, it has become increasingly difficult to accomplish startup cost allocation within a progressive or proportional property tax system. See H. AARON, *supra* note 16, at 2 (in small homogeneous suburbs, property tax is good indicator of benefits and wealth). A classic and more equitable standard for distributing capital service costs is John Stuart Mill's test: each taxpayer "shall feel neither more nor less inconvenience from his share" than does every other taxpayer. Mill, *Principles of Political Economy*, in O. OLDMAN & F. P. SCHOETTLE, STATE AND LOCAL TAXES AND FINANCE 72, 74 (1974). See also A. SMITH, WEALTH OF NATIONS, book V, ch. ii (four desirable qualities of a tax are equality, certainty, convenience, and necessity), *quoted in* Mill, *supra*, at 72-74.

Second, to decide to apportion taxes by strict cost allocation, including startup costs, would have a severe exclusionary impact. For example, tenants, who as a class are less wealthy than homeowners, would be less able to enter communities that sponsor high quality service and educational systems because they alone could not afford to pay, for example, the cost of a new school.

structed flexibly to allow for adjustments in any communities where tenants bear a greater tax burden under strict cost allocation, such a system could maximize the success of achieving simultaneously both the cost allocation goal and the progressivity goal of a local tax system.

B. Exclusionary Impact of a Use Tax

Because a residential use tax can be levied on as narrow a classification of property as the legislature wishes to define, the renters' tax ultimately could be used as a tool of exclusion. By taxing unpopular uses, the legislature can induce prospective residents to locate or relocate in jurisdictions that do not tax such uses. Thus, the first flaw of the renters' tax was to amplify the tax inequity that exists between tenants and homeowners. Its second flaw was to provide a mechanism by which the county could employ the taxing power to do what may be unconstitutional through the use of the police power: to exclude undesirable residential uses.⁹⁶

1. Land use regulation through the police power

Communities traditionally have regulated land use through the exercise of their police power⁹⁷—the power to promote the health, safety, mor-

Educational costs present some of the most vexing problems, because they are generally high and are visibly allocable according to the number of children. To pursue strict cost allocation, however, would run contrary to the traditional theory of funding public education: that well-educated individuals benefit society in general, and that even homeowners without children, or those who send their children to private or parochial schools, are expected to help support community schools.

96. In Prince George's County, there was evidence of some intent to exclude tenants for the sake of preserving the character of the community. When a federally subsidized low-income housing project was demolished, the County Commissioner expressed his pleasure at seeing the destruction of what he described as "magnets for the poor." A newspaper reported, "[The Commissioner's] goal, as a top aide frankly expressed it, is to 'close the county's gates to the poor,' and, he might have added, to low- and moderate-income apartment dwellers generally." *Washington Post*, Nov. 28, 1976, § A, at 1, col. 1.

In addition, plaintiffs challenging the renters' tax could allege exclusionary purpose. "To discourage apartment dwellers as well as keep property taxes for homeowners down, [the Commissioner] also originated an unprecedented 4% tenant tax for renters. At the same time his government has almost frozen the level of social services for the poor in the local budget." *Id.* at col. 2.

On the other hand, the county could proffer as justification that it had recently accepted 18.1% of the Washington metropolitan area's subsidized housing as opposed to 7.8% in Montgomery County and less in each neighboring Virginia county. D. LISTOKIN, *FAIR SHARE HOUSING ALLOCATION* 116 (1976). The District of Columbia, however, had absorbed 59.6%, an indication that each county could have absorbed more than it had. *Id.* A court may be more solicitous of a community's fair share interest if the community is part of an official fair share program, such as the Metropolitan Washington Council of Governments, in which Prince George's County participated. The court "conceivably might regard a 'region' so constructed, and the dependent fair share allocations thereby arrived at, as meriting *prima facie* judicial acceptance." *Oakwood at Madison, Inc. v. Township of Madison*, 72 N.J. 481, 538, 371 A.2d 1192, 1220 (1977) (dictum).

97. *E.g.*, *Berman v. Parker*, 348 U.S. 26 (1954) (validating eminent domain for purpose of

als, and general welfare of the community.⁹⁸ They have developed a variety of zoning techniques, including Euclidean zoning, which restricts uses to particular locations according to a comprehensive plan,⁹⁹ and planned unit developments (PUD's) and cluster zoning, in which planning boards determine the appropriateness of a given use upon application by the developer.¹⁰⁰

In efforts to control the tax base, to exclude certain classes of new residents, or to limit population growth, some municipalities have used exclusionary zoning techniques¹⁰¹ to discourage or prohibit the estab-

urban redevelopment); *Thomas Cusack Co. v. City of Chicago*, 242 U.S. 526 (1917) (valid exercise of police power to prohibit billboards in residential area unless half of residents consent); *Cady v. City of Detroit*, 289 Mich. 499, 286 N.W. 805 (1939) (statute requiring approval of property owners in area as prerequisite to use for trailer camp held valid).

Zoning regulations have been upheld as not violative of the due process clause. *E.g.*, *Euclid v. Ambler Realty Co.*, 272 U.S. 365 (1926) (exclusion from certain area of industrial or commercial uses rationally related to the preservation of health and safety). More recently, zoning regulations have been held to be consistent with the equal protection clause. *E.g.*, *Young v. American Mini-Theatres*, 427 U.S. 50 (1976) (validating statute allowing no more than two adult movie theaters or bookshops to locate within 1000 feet).

Although courts have recognized that public land regulation operates in derogation of the owner's property rights, *e.g.*, *Appeal of Kit-Mar Builders, Inc.*, 439 Pa. 466, 268 A.2d 765 (1970) (Bell, J., concurring); *Exton Quarries, Inc. v. Zoning Bd. of Adjustment*, 425 Pa. 43, 228 A.2d 169 (1967); *National Land & Inv. Co. v. Kohn*, 419 Pa. 504, 215 A.2d 597 (1965), courts nonetheless will balance the importance of the private interest against the threat to the general welfare, and usually will uphold the regulation. *E.g.*, *Euclid v. Ambler Realty Co.*, 272 U.S. 365 (1936) (rejecting landowner's claim of taking without compensation or due process).

98. Ordinances having for their purpose regulated municipal development, the security of home life, the preservation of a favorable environment in which to rear children, the protection of morals and health, the safeguarding of the economic structure upon which the public good depends, the stabilizing of the use and value of property, the attraction of a desirable citizenship and fostering its permanency, are within the ambit of the police power.

Cady v. City of Detroit, 289 Mich. 499, 513, 286 N.W. 805, 810-11 (1939). *See also* *Noble State Bank v. Haskell*, 219 U.S. 104 (1911) (validating under police power an assessment against a bank for the purpose of creating a depositor's guaranty fund).

99. *Euclid v. Ambler Realty Co.*, 272 U.S. 365 (1936); *Exton Quarries, Inc. v. Zoning Bd. of Adjustment*, 425 Pa. 43, 60-61, 228 A.2d 169, 179 (1967).

100. *See* *Cheney v. Village 2 at New Hope, Inc.*, 429 Pa. 626, 241 A.2d 81 (1968) (PUD); *Southern Burlington County NAACP v. Township of Mount Laurel*, 67 N.J. 151, 166, 336 A.2d 713, 720 (1975) (cluster and PUD zoning explained). *See generally* R. BABCOCK, *THE ZONING GAME* (1970).

101. Various definitions of exclusionary zoning have been offered. For example, "Exclusionary zoning" is a phrase popularly used to describe suburban zoning regulations which have the effect, if not also the purpose, of preventing the migration of low and middle-income persons. Since a large percentage of racial minorities fall within the low and middle-income brackets, exclusionary zoning regulations may also effectively wall out racial minorities.

Construction Indus. Ass'n v. City of Petaluma, 522 F.2d 897, 905 n.10 (1975), *cert. denied*, 424 U.S. 934 (1976).

ishment of multi-family residential uses. One of the most common exclusionary techniques is to zone a substantial part of the municipality exclusively for single-family homes built on large lots.¹⁰² Some communities refuse to allow multi-family uses anywhere within the jurisdiction.¹⁰³ Others use the Euclidean rationale of separating incompatible uses to justify excluding apartments from a substantial portion of the jurisdiction.¹⁰⁴ Courts have generally rejected each of these exclusionary zoning methods as unconstitutional, or as contrary to statutory powers to zone.¹⁰⁵

Community planners have invented more subtle methods of inhibiting immigration by middle- and low-income residents. Courts have approved some of these methods. In *Golden v. Town of Ramapo*,¹⁰⁶ for example, the court approved an imaginative slow growth plan that tied residential development to a predetermined eighteen-year growth period in the capital services budget. The plan required any developer who desired an ex-

See generally R. BABCOCK, *supra* note 100; R. BABCOCK & F. BOSSELMAN, *EXCLUSIONARY ZONING: LAND USE REGULATION AND HOUSING IN THE 1970's* (1973); D. LISTOKIN, *supra* note 96; Babcock & Bosselman, *supra* note 37; Listokin, *Fair-Share Housing Distribution: Will It Open the Suburbs to Apartment Development?*, 2 REAL EST. L.J. 739 (1973); Williams & Wacks, *supra* note 42; Case Comment, *The Limits of Permissible Exclusion in Fiscal Zoning*, 53 B.U.L. REV. 453 (1973) [hereinafter cited as *Limits of Fiscal Zoning*].

102. Cases declaring such an exclusion invalid include *Oakwood at Madison, Inc. v. Township of Madison*, 117 N.J. Super. 11, 283 A.2d 353 (L. Div. 1971) (one- and two-acre minimum), *aff'd as modified*, 72 N.J. 481, 371 A.2d 1192 (1977); *Appeal of Kit-Mar Builders, Inc.*, 439 Pa. 466, 268 A.2d 765 (1970) (two or three acres); *National Land & Inv. Co. v. Kohn*, 419 Pa. 504, 215 A.2d 597 (1965) (four acres). *But see Steel Hill Dev., Inc. v. Town of Sanbornton*, 469 F.2d 956 (5th Cir. 1972) (three and six acres upheld); *County Comm'rs v. Miles*, 246 Md. 355, 228 A.2d 450 (1967) (five acres upheld).

103. *Southern Burlington County NAACP v. Township of Mount Laurel*, 67 N.J. 151, 336 A.2d 773 (1975) (no apartment houses except PUD); *Appeal of Girsh*, 437 Pa. 237, 263 A.2d 395 (1970) (no apartments); *cf. Appeal of Community College*, 435 Pa. 264, 254 A.2d 641 (1969) (college not granted special permit as "educational use" within meaning of permitted uses).

104. *Compare National Land & Inv. Co. v. Kohn*, 419 Pa. 504, 215 A.2d 597 (1965) (two and four acre zone over 47% of town held invalid) and *Board of County Supervisors v. Carper*, 200 Va. 653, 107 S.E.2d 390 (1959) (two acre zone over two-thirds of county held invalid) with *Steel Hill Dev. Corp. v. Town of Sanbornton*, 469 F.2d 956 (5th Cir. 1972) (50% of town held valid); *Confederacion de La Raza Unida v. City of Morgan Hill*, 324 F. Supp. 895 (N.D. Cal. 1971) (restricting only hilly areas held valid) and *County Comm'rs v. Miles*, 246 Md. 355, 228 A.2d 450 (1967) (6.7% of town, 30% of prize waterfront held valid).

105. *E.g., Oakwood at Madison, Inc. v. Township of Madison*, 72 N.J. 481, 371 A.2d 1192 (1977) (state enabling act held constitutional; municipal ordinance held invalid because it failed to comport with statutory standard of general welfare); Note, *Phased Zoning: Regulation of the Tempo and Sequence of Land Development*, 26 STAN. L. REV. 585 (1974) [hereinafter cited as *Phased Zoning*].

106. 30 N.Y.2d 351, 285 N.E.2d 291, 334 N.Y.S.2d 138, *appeal dismissed*, 409 U.S. 1003 (1972).

ception from the plan to offer extra capital from his own funds.¹⁰⁷ Courts have upheld other "slow growth" ordinances that limit the annual increase of certain residential uses,¹⁰⁸ or that require the developer to dedicate a percentage of property for streets, parks, or greenbelts, or to contribute to school costs.¹⁰⁹

Courts have invalidated regulations where the provisions restrict the number of children residing in one unit¹¹⁰ or require costly improvements,¹¹¹ thus effectively excluding middle- and low-income families. Under established case law, a local governmental jurisdiction may not zone to prohibit the building and renting of apartments when there is a need for such a use,¹¹² nor may the jurisdiction halt the inevitable growth

107. The plan was upheld as a wise program using only temporary and conditional restrictive measures to control the time and sequence of development. *Accord*, Builders Ass'n v. Superior Court, 13 Cal. 3d 225, 233, 529 P.2d 583, 587, 118 Cal. Rptr. 158, 163 (1974) (two year moratorium, limited and with exceptions, to remedy crowded schools "need not serve to exclude newcomers").

108. *Cf.* Construction Indus. Ass'n v. City of Petaluma, 522 F.2d 897 (9th Cir. 1975), *cert. denied*, 424 U.S. 934 (1976) (numerical ceiling on apartments upheld); Appeal of Kit-Mar Builders, Inc., 439 Pa. 466, 268 A.2d 765 (1970) (temporary restrictions of permits allowed for reasonable time if for ultimate good of town, but only as necessary) (*dictum*).

109. *E.g.*, Construction Indus. Ass'n v. City of Petaluma, 522 F.2d 897 (9th Cir. 1975), *cert. denied*, 424 U.S. 934 (1976) (limited number of permits granted on basis of points awarded to builders for conforming to plan of environmental and architectural design and for providing low- and middle-income housing); Builders Ass'n v. Superior Court, 13 Cal. 3d 225, 529 P.2d 582, 118 Cal. Rptr. 158 (1974) (two year moratorium on zoning or rezoning for residential use, except builder providing temporary alternative to school construction); Golden v. Town of Ramapo, 30 N.Y.2d 351, 285 N.E.2d 291, 334 N.Y.S.2d 138, *appeal dismissed*, 409 U.S. 1003 (1972). *See Limits in Fiscal Zoning*, *supra* note 101; Note, *Phased Zoning*, *supra* note 105; *cf.* Southern Burlington County NAACP v. Township of Mount Laurel, 67 N.J. 151, 186-87, 336 A.2d 713, 731 (1975) (environmental reasons must be substantial and not just makeweight).

110. Southern Burlington County NAACP v. Township of Mount Laurel, 67 N.J. 151, 336 A.2d 713 (1975) (required lease provision that no school children inhabit one-bedroom unit and no more than two inhabit two-bedroom unit); Oakwood at Madison, Inc. v. Township of Madison, 117 N.J. Super. 11, 283 A.2d 353 (L. Div. 1971) (prohibited construction of three-bedroom apartments, and limited two-bedroom apartments to no more than 20% of units in development), *aff'd as modified*, 72 N.J. 481, 371 A.2d 1192 (1977). School costs have been the major concern behind such restrictions.

111. Aside from lot size, various requirements for either zoning or building permits price the property out of the reach of low- and middle-income families. *E.g.*, Confederacion de La Raza Unida v. City of Morgan Hill, 324 F. Supp. 895 (N.D. Cal. 1971) (density, placing of underground utilities, planting slopes, aesthetics); Lionshead Lake, Inc. v. Wayne Township, 10 N.J. 165, 89 A.2d 693 (1952) (minimum floor area); Molino v. Borough of Glassboro, 116 N.J. Super. 195, 281 A.2d 401 (L. Div. 1971) (minimum floor area, eight square feet of swimming pool or tennis court for every hundred square feet of living space, central air-conditioning, automatic garbage disposal, planting screen).

112. *See* Appeal of Community College, 435 Pa. 264, 254 A.2d 641 (1969); Exton Quarries, Inc. v. Zoning Bd. of Adjustment, 425 Pa. 43, 228 A.2d 169 (1967).

of apartments once the use is already established,¹¹³ or force those tenants already residing in the area to move elsewhere.¹¹⁴

2. *Locational incentive created by a residential use tax*

A community can achieve a similar regulatory effect on land use by employing its taxing power. Taxes that are enacted in only one local jurisdiction will create an interjurisdictional tax differential, which, when levied upon residential property, may precipitate a "locational incentive."¹¹⁵ The differential may cause residents¹¹⁶ to move to neighboring jurisdictions that do not charge a similar tax, or it may discourage potential residents from ever entering the taxing jurisdiction.

113. See, e.g., *Construction Indus. Ass'n v. City of Petaluma*, 522 F.2d 897 (9th Cir. 1975), cert. denied, 424 U.S. 934 (1976); *Confederacion de La Raza Unida v. City of Morgan Hill*, 324 F. Supp. 895 (N.D. Cal. 1971); *Builders Ass'n v. Superior Court*, 13 Cal. 3d 225, 529 P.2d 583, 118 Cal. Rptr. 158 (1974).

114. See, e.g., *Appeal of Kit-Mar Builders, Inc.*, 439 Pa. 466, 268 A.2d 765 (1970); *Board of County Supervisors v. Carper*, 200 Va. 653, 107 S.E.2d 390 (1959); *National Land & Inv. Co. v. Kohn*, 419 Pa. 504, 215 A.2d 597 (1965); *Oakwood at Madison, Inc. v. Township of Madison*, 117 N.J. Super. 11, 283 A.2d 353 (L. Div. 1971), *aff'd as modified*, 72 N.J. 481, 371 A.2d 1192 (1977); *Southern Burlington County NAACP v. Township of Mount Laurel*, 67 N.J. 151, 336 A.2d 713 (1975). *But see* *Lionshead Lake, Inc. v. Wayne Township*, 10 N.J. 165, 89 A.2d 693 (1952) (minimum floor area approved).

115. Aronson & Schwartz, *Financing Public Goods and the Distribution of Population in a System of Local Governments*, 26 NAT'L TAX J. 137, 138 (1973) (experimental research concluding that fiscal factors significantly affect location and migration). See also Miller & Tabb, *supra* note 42 (residents will migrate in a manner that maximizes their community services per tax dollar).

Charles Tiebout first developed the locational incentive theory. Currier, *supra* note 15, at 55-56.

Tiebout's theory envisions (1) a number of localities each offering a different menu of public goods and (2) a population of perfectly mobile individuals each choosing to take up residence in that community coming closest to matching his preferred mix of public goods and services. . . . If it were possible to charge each individual on the basis of his consumption of public goods, individual preferences for local goods (and taxes) would be perfectly satisfied. . . .

Aronson & Schwartz, *supra* at 138.

Two other recent studies confirm Tiebout's thesis for residential uses, although one study found additional significant factors to be population density, land surface characteristics, and location with respect to the central city. Currier, *supra* note 15, at 55-56 & n.126. A third study, which concluded that residential decisions were almost completely insensitive to tax differentials, tested the behavior of the affluent homeowner and found it inapposite to that of less wealthy tenants. R. BARLOW, H. BRAZER, & J. MORGAN, *ECONOMIC BEHAVIOR OF THE AFFLUENT* (1966), cited in D. Netzer, *State-Local Finance and Intergovernmental Fiscal Relations*, in O. OLDMAN & F. SCHOETTLE, *STATE AND LOCAL TAXES AND FINANCE* 101-04 (1974) [hereinafter cited as *Intergovernmental Fiscal Relations*]. In addition, the author of the third study explained its results, in part, by the deductibility of homeowners' property taxes from federal income taxes. This deduction is not available to tenants. See notes 64-71 & accompanying text *supra*.

116. The scope of this discussion is limited to residential location decisions. Commercial location is thought to involve a three-step decisionmaking process, with tax differentials playing an important role only in the final step. See Currier, *supra* note 15, at 55-57.

The renters' tax illustrates the locational incentive theory. The tax raised the cost of renting an apartment and living in Prince George's County. If all surrounding communities levied an equivalent tax, tenants could not escape paying the tax, the demand for rental units would be unchanged,¹¹⁷ and the economic incidence would fall to the tenant.¹¹⁸ Thus, the extra levy would only increase tenants' already disproportionate tax burdens, although it would have no exclusionary effect.

If only one community in a metropolitan area passes a renters' tax, however, the interjurisdictional tax differential would induce tenants to seek to relocate in nearby nontaxed jurisdictions in order to seek relief from economic incidence of the tax.¹¹⁹ Depending upon the strength of this locational incentive,¹²⁰ a community could more or less completely exclude low-income tenants by using the taxing power instead of the police power.¹²¹

II. AN ALTERNATIVE LAND USE TAX SYSTEM

States have invented a wide variety of tax relief mechanisms,¹²² but all

117. If renters were able to, they would invest in a home in order to escape their disadvantageous tax treatment, but their lower average income precludes their following this investment incentive. See note 60 *supra*.

118. Like the property tax, the renters' tax, which acts like an excise, may fall upon either landlord or tenant. Excise taxes are apportioned between a supplier and a consumer according to the elasticity of the market. P. SAMUELSON, *supra* note 78, at 373, 385. If supply is fairly inelastic, the majority of the tax burden would be borne by the consumer since the seller would be able to maintain his pre-tax profit while still moving the desired quantity of goods. Elasticity in the housing market within a taxing jurisdiction may be positively related to several factors, including the mobility of tenants and homeowners, the proximity of the central city, the tax service ratio, the quality of life in the area, and the availability of alternative residences.

119. This conclusion makes the assumption that all other factors between jurisdictions are equal.

120. Tax differentials between two residential areas within a metropolitan region will create a greater locational incentive than if the differential were between taxing jurisdictions of different regions. *Intergovernmental Fiscal Relations*, *supra* note 115, at 103.

121. An analogous phenomenon is the concept of tax competition—that local jurisdictions compete to attract businesses or housing which yield tax revenues greater than the cost of that taxpayer's share of government services. O. OLDMAN & F. SCHOETTLE, *STATE AND LOCAL TAXES AND FINANCE* 100 (1974); Williams & Wacks, *supra* note 42, at 827, 829. Examples of overt influences are tax credits for investment and arbitrage bonds. More covert incentives include undervaluating property, granting subsidies to industry for training workers, and granting housing subsidies. Just as tax relief measures encourage location within the jurisdiction, additional tax levies will encourage migration to other jurisdictions.

122. "Circuit-breaker" provisions allow credit against or deductions from property tax liability. Many of these measures are for the elderly, and may be tied to poverty, disability, or ownership of a homestead. E.g., CONN. GEN. STAT. ANN. §§ 12-170(a) to -170(e) (West Supp. 1977) (property tax credit for certain low-income residents if taxpayer of record; partial refund of rent and utility is dependent on percentage of bills less percentage of qualifying income); HAW. REV. STAT. §§ 246-26 to -27 (1975) (residential leases over five years entitled to homestead exemption); ILL. ANN. STAT. ch. 120, § 500.23-1 (Smith-Hurd Supp. 1977) (\$1,500 reduction in equalized or assessed value for senior citizen taxpayer of record); *id.* ch. 67½, §§ 401-404 (cash grant when household

treat tenants in an ad hoc manner, if at all,¹²³ and none afford tenants the same opportunity homeowners have to deduct property taxes under I.R.C. § 164(a)(1).¹²⁴

liable for property tax); ME. REV. STAT. tit. 36, §§ 6101-6119 (Supp. 1976) (rent and tax refund for qualified resident with income and assets below certain amount); MINN. STAT. ANN. §§ 290.0601-.0617 (Supp. 1977) (elderly and disabled claim credit equal to percentage of property tax graduated with respect to income or 20% gross rent paid on home); MONT. REV. CODE ANN. §§ 84-301 to -308 (Supp. 1975) (favored fractional assessment of improvements on property for elderly, where all property classified by use); N.J. REV. STAT. ANN. § 54:4-8.41 (West Supp. 1976) (\$160 deduction from taxes assessed against residence of low-income senior citizen). See generally H. AARON, *supra* note 16 (circuit-breakers useful as interim relief measure only); Bendick, *Designing Circuit-Breaker Property Tax Relief*, 27 NAT'L TAX J. 19 (1974); *Tax Relief for the Homeowner?*, *supra* note 58, at 489 (arguing that tax should be postponed, not forgiven, although the Advisory Commission on Intergovernmental Relations advocates circuit-breakers); Kee & Moan, *supra* note 39, at 533; Rose, *From the Legislatures*, 2 REAL EST. L.J. 602 (1973) (Vermont property tax dependent on owner's income as well as assessed value) (citing VT. STAT. ANN. tit. 32, §§ 5961, 5967, 5973, 5976, 5977 (Supp. 1977)). See also Rothenberg, *supra* note 16, at 179 (Michigan, Vermont, and Wisconsin extended use of income principle to provide property tax relief for all taxpayers within certain income bracket).

Some states give an outright abatement of the property tax to those in need of financial relief. CONN. GEN. STAT. ANN. §§ 8-215 to -216 (West Supp. 1977) (municipality may classify property used solely for low- and middle-income housing to abate taxes thereon); ME. REV. STAT. tit. 36, § 841 (1965) (assessor, on own knowledge and written approval, may make reasonable abatements on property of needy); N.J. STAT. ANN. § 54:4-100 (West 1960) (abatement if the market value of property is less than principal sum of taxes due); cf. CAL. REV. & TAX. CODE § 19523 (West Supp. 1977) (graduated percentage assistance up to 96% of first \$8,500 of value available to senior citizens liable for property taxes if income not more than \$3,000).

Aside from circuit-breakers, new and more general provisions relieve property tax burdens on homeowners. "Tax lids," for example, limit the increase in property tax rates to those rates applied in a prior year. Such tax lids do not, however, help to alleviate the regressivity of property taxes, since they apply across the board. KAN. STAT. ANN. §§ 79-5001 to -5017 (Supp. 1976) (as of 1970, no ad valorem levy allowed in excess of 1969 aggregate levy). See generally Note, *Municipal Corporations*, 22 KAN. L. REV. 151 (1973).

Minnesota operates a tax base sharing program that pools 40% of the increase in the tax base of all commercial and industrial property surrounding the Twin Cities, and distributes the revenues according to need and fiscal capacity. MINN. STAT. ANN. §§ 473F.01-.13 (West Supp. 1977). The Minnesota Supreme Court has held the program to be a uniform tax, on the rationale that all taxpayers in the larger metropolitan area benefit equally because of the individual communities' fiscal interdependence. The court refused to apply a requirement that those who pay tax must receive a specific benefit. *Village of Burnsville v. Onischuk*, 301 Minn. 137, 222 N.W.2d 523 (1974), *appeal denied*, 420 U.S. 916 (1975). See also *Meadowlands Reg. Dev. Agency v. New Jersey*, 112 N.J. Super. 89, 270 A.2d 418 (1970), *aff'd*, 63 N.J. 35, 304 A.2d 545 (1973) (tax-sharing plan upheld, *inter alia*, as proper delegation of taxing power).

123. Except for occasional passthrough provisions, tax relief for tenants usually appears in conjunction with state income tax systems. E.g., ARIZ. REV. STAT. § 43-128.01 (Supp. 1977) (graduated credit on income tax up to 100% of property tax for elderly, low-income owners or tenants, assuming amount constituting property tax is 25% of rent paid); *id.* § 43-128.02 (alternative tax credit in amount of 10% of rent paid or \$50 to anyone who rents for over six months); CAL. REV. & TAX. CODE § 17053.5 (West Supp. 1977) (\$37 tax credit for qualified renters); IND. CODE ANN. § 6-3-3-6 (Burns Supp. 1976) (elderly or disabled renters receive deduction of up to 75% of that rent constituting property tax—such rent calculated as 20% of gross rent up to \$500); MICH. COMP. LAWS ANN. § 206.520 (Supp. 1975) (credit representing real estate taxes equal to 17% of

The system proposed here, designed to maximize both progressivity and cost allocation, abandons the ad valorem property tax, and adopts instead an excise tax based upon the nature of land use.¹²⁵ One of its important advantages is that it would tax residents equitably, without having to meet the constitutional requirement of being ad valorem. Further, a use tax would allow neighboring jurisdictions to engage in cooperative land use planning through the use of interjurisdictional tax differentials and the resulting locational incentive.

A. The Proposed Use Tax System

The New Jersey study¹²⁶ demonstrated that changes in revenue surplus are correlated to the nature of residential use. Therefore, a community

gross rent paid by tenant); MINN. STAT. ANN. § 290.981-.992 (West 1977) (persons residing in leased unit operated for profit may credit against income tax 10% of rent paid up to \$120 annually); N.M. STAT. ANN. § 72-15A-11.1 (Supp. 1975) (deduction available to certain low-income residents for state and local taxes paid); see Shannon, *supra* note 58, at 502 (table showing estimated costs of rebating to renters and homeowners).

124. Commentators have tended to limit their proposals to suggestions that legislation provide tenants the I.R.C. § 164(a)(1) deduction by passing through to tenants the legal incidence of the property tax. *E.g.*, *The Tenant Tax Act*, *supra* note 46, at 341-62 (presenting model state legislation); Kee & Moan, *supra* note 39.

125. An alternative proposal would be to tax apartments in the same manner in which many jurisdictions tax condominiums, appraising each unit separately and dividing common areas among residents. *See, e.g.*, NEB. REV. STAT. § 76-823 (1976); R.I. GEN. LAWS § 34-36-27 (1969). In such a system, appraisal of individual units might be similar to the treatment of tax-exempt land.

When a tax-exempt owner such as a municipal government or a charitable or religious organization leases land to a lessee that does not have a tax-exempt status, most states provide that the lessee will be taxed for the property as if he were the owner. *E.g.*, ALA. CODE, tit. 25, § 101 (Supp. 1973); ALASKA CONST. art. IX, § 5; ALASKA STAT. § 29.53.020(a)(1) (1972) (taxable to lessee to extent of his interest). The assessor must consider fair market value in valuating the property to be taxed. The value presumably is the property value to the extent of the leasehold interest, minus the remainder of rent reserved. Koeppel & Kramer, *supra* note 35; *The Reasonable Assessor Standard*, *supra* note 19, at 142 (quoting *St. Louis County v. State Tax Comm'n*, 406 S.W.2d 644, 650 (Mo. 1966); see *Pier 67, Inc. v. King County*, 78 Wash. 2d 48, 469 P.2d 902 (1970), *cert. denied*, 401 U.S. 911 (1971); Recent Developments, *State Taxation—Privately Held Leaseholds in Publicly Owned Land*, 49 WASH. L. REV. 913 (1974). *Pier 67, Inc.* held that assessors shall determine "the fair market value of the right to use the property over the period of the lease without deduction for rents reserved or mortgage indebtedness," as had been done previously, *Id.* at 914. See also note 35 & accompanying text *supra* (contract rent and fair market rent).

The Maryland legislature is considering a constitutional amendment to lift uniformity requirements, and it is seeking other means of raising revenue as well. See Washington Post, Feb. 25, 1977, § C, at 5, col. 1 ("The property tax has become a penalty for the sin of owning a home."—homeowner complaining to legislature). One proposed bill would allow Prince George's County "to tax anything not taxed by the state and anything that does not follow [*sic*] into the categories of: use of fuel or energy, intangible personal property, inheritances, insurance premiums, and most other sales taxes." Washington Post, Feb. 25, 1977, § C, at 1, col. 6. Some see the proposal as "the tenant tax in disguise." *Id.* § C, at 5, col. 6.

126. CUPR STUDY, *supra* note 89.

could more accurately equate taxes collected from uses with the respective revenue demands of those uses if it based the tax upon the average service cost for each category of use rather than upon inaccurate real property appraisals. More importantly, the regressive pattern of revenue surpluses¹²⁷ means that a use tax would be more progressive than is the current property tax.

The nature of the use and the wealth or income of the individual resident are the legal incidents of taxation. The mechanics of taxing those incidents are as follows: the assessor would compute average annual service costs attributable to each type of use, and build a tax base from this cost base by applying a multiplier to all costs. The system would then become self-executing. Each taxpayer would select the appropriate tax base from tables published by the municipality, make adjustments for income, old age, disability, or any other factor the jurisdiction may choose to recognize,¹²⁸ and apply the tax rate for the year to the adjusted tax base in order to obtain his tax liability. The system would operate as illustrated in Tables 1 and 2.

127. The surplus decreases continuously from tenants of high-rise apartments to those of town-houses and, finally, to those of garden apartments. Single-family homeowners are more likely to contribute *less* than they consume than any other residential group. *Id.* See note 93 *supra*. This pattern implies regressivity because tenants as a group have a lower income than homeowners. See note 60 *supra*.

128. See notes 75-76, 122 & accompanying text *supra* for a sampling of some protected characteristics.

TABLE 1
Computation of Land Use Tax
for Multi-Family Uses

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)
	exemplary actual income	cost base*	tax base (multiplier = 8)	average income	10% of difference between actual & average income [.10 (a) - (d)]	adjusted tax base (c) + (e)	tax 12.5% of (f)	percentage of income tax as a 100(g)
garden apartment	\$ 5,000	\$ 182.12	\$1,456.96	\$ 9,000	\$ -400	\$1,056.96	\$ 132.12	2.642%
	7,000	182.12	1,456.96	9,000	-200	1,256.96	157.12	2.245
	10,000	182.12	1,456.96	9,000	+100	1,556.96	194.62	1.946
garden apartment	7,000	540.36	4,322.88	9,000	-200	4,122.88	515.36	7.362
	10,000	540.36	4,322.88	9,000	+100	4,422.88	552.86	5.529
	15,000	540.36	4,322.88	9,000	+600	4,922.88	615.36	4.102
townhouse	10,000	408.98	3,271.84	20,000	-1000	2,271.84	283.98	2.840
	15,000	408.98	3,271.84	20,000	-500	2,771.84	346.48	2.310
	20,000	408.98	3,271.84	20,000	0	3,271.84	408.98	2.045
townhouse	10,000	885.56	7,084.48	20,000	-1000	6,084.48	760.56	7.606
	20,000	885.56	7,084.48	20,000	0	7,084.48	885.56	4.428
	25,000	885.56	7,084.48	20,000	+500	7,584.48	948.06	3.792

townhouse	4	15,000 25,000 40,000	1,278.87 1,278.87 1,278.87	10,230.96 10,230.96 10,230.96	20,000 20,000 20,000	-500 +500 +2000	9,730.96 10,730.96 12,230.96	1,216.37 1,341.37 1,528.87	8,109 5,365 3,822
highrise	studio	5,000 7,000 10,000	82.81 82.81 82.81	662.48 662.48 662.48	≈ 11,600 ≈ 11,600 ≈ 11,600	-660 -460 -160	2.48 202.48 502.48	0.31 25.31 62.81	0.000 0.362 0.628
highrise	1	7,000 10,000 15,000	142.54 142.54 142.54	1,140.32 1,140.32 1,140.32	≈ 11,600 ≈ 11,600 ≈ 11,600	-460 -160 +340	680.32 980.32 1,480.32	85.04 122.54 185.04	1,215 1,225 1,234
highrise	2	10,000 15,000 25,000	356.85 356.85 356.85	2,854.80 2,854.80 2,854.80	≈ 11,600 ≈ 11,600 ≈ 11,600	-160 +340 +1340	2,694.80 3,194.80 4,194.80	336.85 399.35 524.35	3,369 2,662 2,097

* See Table 3, col. (g).

1. Computing average service cost for each use category.

The assessor can compute school and municipal (nonschool) costs according to the scheme in Table 3.

TABLE 3

		(a)	(b)	(c)	(d)	(e)	(f)	(g)
		average number of persons per unit*	average municipal cost per person***	municipal cost per unit (a) × (b)	average number of pupils per unit**	average school cost per pupil***	school cost per unit (d) × (e)	total service cost per unit (c) + (f) "COST BASE"
garden apartment	number of bedrooms							
	1	1.902	71.95	136.85	.046	984.12	45.27	182.12
	2	2.805	71.95	201.82	.344	984.12	338.54	540.36
townhouse	2	2.675	71.95	192.47	.220	984.12	216.51	408.98
	3	3.349	71.95	240.96	.655	984.12	644.60	885.56
	4	3.741	71.95	269.16	1.026	984.12	1,009.71	1,278.87
	studio	1.151	71.95	82.81	.000	984.12	0.00	82.81
highrise	1	1.817	71.95	130.73	.012	984.12	11.81	142.54
	2	2.484	71.95	178.72	.181	984.12	178.13	356.85
	3	3.307	71.95	237.94	.626	984.12	616.06	854.00
	4	3.720	71.95	267.65	1.293	984.12	1,272.47	1,540.12
single-family	3	3.307	71.95	237.94	.626	984.12	616.06	854.00
	4	3.720	71.95	267.65	1.293	984.12	1,272.47	1,540.12

* CUPR STUDY, *supra* note 86, at 4. Taken from door-to-door survey of 7,500 residential units in multiple New Jersey municipalities. The sample was designed to be representative of many taxing jurisdictions.

** CUPR STUDY, *supra* note 86, at 7. See preceding note.

*** CUPR STUDY, *supra* note 86, at 44. Exemplary figures only; obtained from Manalapan, New Jersey.

The model distinguishes school costs from municipal costs because school costs normally consume a high portion of the municipal budget,¹²⁹ and because the number of school children varies considerably among use categories.¹³⁰ For similar reasons, the model subclassifies uses according to number of bedrooms.

Although the computation of average per capita costs, regardless of use, ignores cost differentials between uses, multiplying per capita cost by the average numbers of persons and pupils within each separate use category adjusts the model to reflect those cost differentials. The sum of the average municipal cost per use and the average school cost per use would equal the cost base, or the total cost to the community created by that type of housing.¹³¹ All such sums aggregated should equal that part of the municipal budget that reflects service costs allocable to residential housing in the community.¹³²

Large-lot single-family residences present an additional cost to the community. If the property were more densely populated, additional taxpayers would be available to pay for general services such as police protection and roads.¹³³ The model provides an acreage adjustment for land-intensive single-family homes in order to attribute this cost to the actual user. To accomplish the adjustment, the assessor would apply a land use factor according to the amount of land devoted to each single-family use.¹³⁴

129. In the model, school costs are 93.19% of all costs attributable to residential uses. See CUPR STUDY, *supra* note 89, at 44 (Manalapan, New Jersey). In any community where the percentage is lower, the model will be even more effective because it will create a smaller disparity between uses with a high average number of pupils and those with a low average number.

130. For example, the CUPR STUDY found that one-bedroom garden apartments house, on the average, .046 school age children, while four-bedroom, single-family houses average 1.293 school age children. See Table 3. The Survey also found that these averages remained almost identical for the ten-year period studied. CUPR STUDY, *supra* note 89, at 25.

131. Cost base is reflected in Table 3, col. (g); Table 1, col. (b); Table 2, col. (b).

132. Most communities, however, also contain a variety of nonresidential uses. See note 143 & accompanying text *infra*.

133. In addition, the vacant land represents lost revenue, because if it were devoted to an industrial or commercial use, it would produce revenue, which would help to alleviate tax burdens on residents. See note 143 & accompanying text *supra*. The acreage adjustment is analogous to the property tax practice of assessing for highest and best use that the property might support. See note 27 *supra*.

134. See Table 2, col. (c). The factors can be chosen with reference to size of the average single-family lot in the community, or to the average land value per acre in the jurisdiction. Table 2 uses the following scale:

amount of land (a=acres)	adjustment factor	amount of land (a=acres)	adjustment factor
0 < a ≤ 0.5	1.0	2.0 < a ≤ 2.5	1.4
0.5 < a ≤ 1.0	1.1	2.5 < a ≤ 3.0	1.5
1.0 < a ≤ 1.5	1.2	3.0 < a ≤ 3.5	1.6
1.5 < a ≤ 2.0	1.3		

2. Determining the cost base multiplier and the tax rate

In order to distribute the tax burden progressively, through the use of an *arithmetic* income deduction,¹³⁵ the cost base for each use first must be increased *geometrically*. Without a geometric increase, the result of the application of the income deduction to some uses may result in a negligible or negative adjusted tax base and thus a small or negative tax. The cost base should be increased geometrically, rather than arithmetically, so as to accentuate cost differentials between uses before adjusting for income.¹³⁶

In the case of multi-family uses, for which the assessor would make no acreage adjustment, the cost base multiplier should equal the reciprocal of the tax rate.¹³⁷ As noted above, the multiplier is artificial; it merely facilitates manipulation of the tax base. To that extent, the tax rate is also artificial. It scales down the previously inflated cost base so that the revenue actually collected once again can equal the cost, adjusted for income, to the community of the particular use. Although the reciprocals can be established at any level, the assessor should choose a multiplier which is low enough to allow the percentage of income adjustment to have a significant impact.¹³⁸

For single-family homes, the tax rate may be identical to that applied to multi-family uses. Since the straight cost allocation already has been altered by the acreage adjustment, however, the cost base multiplier may be lower than the reciprocal of the tax rate and still allow the use tax to net from single-family dwellings approximately the cost of what they require in services.¹³⁹

135. See notes 140-43 & accompanying text *infra*.

136. In this model, the range in income adjustments for multi-family uses extends from -\$1,420 to +\$2,080, a difference of \$3,500. Table 1, col. (e). The range in multi-family use cost bases, however, extends from \$82.81 to \$1,278.87, a difference of only \$1,196.07. Table 1, col. (b). Raising the cost base arithmetically to avoid producing any negative adjusted tax base would not alleviate the overaccentuation of income in the resulting tax. By raising the cost base geometrically, however, in this case by a factor of 8, see note 137 *infra*, an assessor could expand its range to a span of \$9,568.48, the difference between \$10,230.96 and \$662.48. Table 1, col. (c). When income adjustments from a range of \$3,500 are made in a tax base having a range of \$9,568.48, the resulting tax reflects use costs to a greater extent than income.

137. For example, in the model portrayed by Table 1, the tax rate is 12½%; the multiplier therefore is 8. Table 1, cols. (g) and (c).

138. See discussion of comparative ranges of cost bases and income adjustments, *supra* note 136. The model portrayed by Tables 1 and 2 adjusts income by ±10%. See notes 140-45 & accompanying text *infra*. Adjustments by a higher percentage of income will tolerate a higher cost base multiplier and, consequently, a lower tax rate. In metropolitan areas, regional planning might play an important role in determining a proper tax rate. See notes 148-52 & accompanying text *infra*.

139. In Table 2, the tax rate is still 12½%, but the cost base multiplier is only 7. The sum of all taxes levied is \$14,858.79. Table 2, col. (h). This is still greater than \$14,364.72, the sum of the cost of all uses. Table 2, col. (b).

3. *Determining the income adjustment formula to be applied by taxpayers*

A straight per capita tax obviously is regressive and, therefore, undesirable where one goal sought to be accomplished by replacing the property tax is to minimize regressivity. The acreage adjustment counteracts some of this regressivity, but it relieves regressivity only among homeowners.¹⁴⁰ Adjustments for income among both homeowners and tenants, however, could heighten progressivity.

Assessors would have to select an appropriate classification of uses to employ in averaging incomes. The model, as portrayed in Table 2, averages income across all types of single-family homes on the rationale that, assuming incomes vary greatly among homeowners, homeowners as taxpayers need the redistributive effect of a broad income adjustment.

As is apparent from Table 1, the model advocates averaging income for multi-family uses only within each use category. This type of income adjustment supports the major advantage of use taxes: the building or complex *as a whole* would contribute in revenue what it costs the municipality, whether the building contains mostly one-bedroom garden apartments within the reach of lower income groups, or four-bedroom townhouses which attract wealthier families.¹⁴¹ Because of this use-cost allocation, community planners would not need to counterbalance every one-bedroom unit with a more highly-taxed townhouse in order to preserve the tax base. Additionally, averaging income within each use would alleviate the most harmful type of regressivity inherent in cost allocation: that which is caused by an increasing number of school children for whom burdensome school costs are incurred.¹⁴²

Lowering the tax base would accomplish a greater redistribution of income when identical income adjustments are made, because the same percentage of income would be added to or subtracted from a lower dollar tax base. This result is especially desirable for single-family homeowners, because they as a group would pay more dollars in taxes than would residents of multi-family dwellings as a group. Compare Table 1, col. (g) with Table 2, col. (h).

In addition, homeowners may earn more disparate incomes than tenants, and therefore may need a more powerful equalizer. The taxing jurisdiction might wish to ease tax burdens on lower income homeowners to a greater degree than on tenants in general in order to encourage purchases of homes. If the jurisdiction wishes to avoid the more powerful distributive effect, however, it might do so simply by reducing the percentage of income used to adjust the tax base.

140. This assumes that, on the average, families residing in three-bedroom houses on two-acre lots have greater average incomes than those residing in similar houses on half-acre lots.

141. Cf. G. STERNLIEB & J. HUGHES, *HOUSING AND ECONOMIC REALITY: NEW YORK CITY 1976* 121 (1976) (as renters' income scale ascends, rental rates climb correspondingly).

142. See Table 3, col. (f). The use tax may be more progressive than the property tax for another reason. It can be hypothesized that the incomes of residents generally rise along the continuum from studio apartments in highrises, through a series of larger multi-family uses, to single-family homes. See note 141 *supra*. The cost/revenue surplus displayed by the CUPR STUDY, *supra* note 89, gener-

In summary, after assessing all use costs,¹⁴³ the assessor would average the income of all residents within each use category, apply the cost base multiplier to the cost base, and publish the resulting tax bases and average incomes¹⁴⁴ in a table with instructions. Each residential taxpayer, after selecting his appropriate use category according to use, number of bedrooms, and acreage, if applicable, would locate the tax base assigned to that use. He then would take ten percent of the difference between his family income and the average income for that use, and adjust the tax base accordingly. He would make other similar adjustments as prescribed by the taxing jurisdiction to obtain the adjusted tax base.¹⁴⁵ Finally, he would apply the tax rate to the adjusted tax base to compute his tax liability.

4. Reducing rents

Under the use tax, tenants would be liable for a tax bill, which they had never received before, while they watched their landlords' taxes fall. Tenants, however, would merely pay, by direct incidence of the use tax, that amount which they formerly paid in indirect taxes. Similarly, the landlords' taxes would only appear to be lower than they were under the

ally varies inversely with this progression of income. Therefore, merely by a more accurate allocation of costs to each use, taxpayers at the low end of the income scale will be paying less tax, and those at the high end will be paying more. The adjustment in use cost for redistribution of income would create a direct relationship between income and taxes. The model does not average together the incomes represented by all uses because such a broad redistribution would dilute the already direct relationship between use cost and income.

143. The assessor should deduct industrial and commercial use revenue from the municipal budget before he computes the per capita service cost for residential uses. This comment has made no attempt to address in detail the extension of the use tax system to nonresidential uses. The commercial and industrial makeup of communities varies too much to develop here a reasonable model without adequate statistical support. Perhaps more importantly, such a proposal must include analysis of tax competition and other political factors that operate to influence tax decisions even under the property tax.

Like the residential use tax, however, a commercial taxing scheme might contain considerations of the cost of the precise use and of the income it produces. Use costs could be assessed by considering such factors as cost of pollution control and clean-up; extra demands on water, sewage, police, and fire services; and potential for attracting new residents and their children to the community. Since even under the property tax, commercial uses are appraised by capitalizing income, a large income adjustment could be reasonably installed in the use tax, whether it represents current flow of income or capitalization of income. See notes 33-36 & accompanying text *supra*.

Landlords are unique commercial users. Although tenants already pay use tax, which represents their individual units, an additional tax on the landlord's commercial use of the property could help to pay for startup costs. See note 95 *supra*. A landlord's use tax should not be as large as his current property tax liability, but might be approximated by subtracting from his old property tax bill the total use taxes now paid by all his tenants. The remainder would be the landlord's tax bill.

144. Table 1, cols. (c) and (d); Table 2, cols. (d) and (e).

145. See note 128 & accompanying text *supra*.

property tax system; an owner's liability for use taxes would approximate the amount he actually paid *after* passing through much of the property tax to tenants.

The transition from property to use tax would not be automatic. Since jurisdictions adopting the use tax would charge tenants directly, instead of through rent, they would have to mandate rent reduction both to avoid taxing tenants twice and to help the rental housing market adjust to the change. Some jurisdictions that have enacted other forms of tenant tax relief have compelled landlords to pass their property tax reductions through to tenants.¹⁴⁶ Use tax jurisdictions would have to enact similar passthroughs, to be effected in the year of transition from property taxes to use taxes. Under such schemes, to determine new rent levels, landlords would deduct their property tax liability from their potential rental income in the last year that property taxes were collected.¹⁴⁷ Over time, market forces should restore equilibrium to the rental housing market.

5. Tax rate differentials and land use planning

Jurisdictions may elect to vary tax rates among uses in order to create interjurisdictional and inter-use tax differentials.¹⁴⁸ By doing so, communities could operate the use tax system in a manner that assists land use planning goals and supports their zoning systems. For example,

146. For example, Arizona classifies property into six groups for purposes of valuation and applies different assessment ratios to each group. ARIZ. REV. STAT. § 42-136 (Supp. 1977). Recently, the Arizona legislature, with the intent of reducing the tax burden on apartments, separated residential rental property from other commercial or industrial uses. *Id.* § 42-227(6). The assessment ratio for apartments, formerly 27% as a commercial use, was reduced over three years to 21%. The landlord must pass through his full tax reduction to renters by reducing rents in shares proportionate to each tenant's share of the total rent. *Id.* § 42-228.01.

147. Whether to allow landlords to pass through as much of their own commercial use tax as the market will bear is a difficult question. Because the natural rate of passthrough of property taxes is unknown, it is unclear how the land use tax system may best help the market reach equilibrium most quickly and, at the same time, suffer the least distortion. The tax system could allow landlords to pass through their entire tax, or could force landlords to pay the tax themselves. The addition of any tax might raise rents to an artificially high level and would impose higher net land use costs on tenants who must pay rent plus use tax in addition to their pro rata share of the landlord's tax. On the other hand, prohibiting landlords from passing through any of their own use tax liability in the first year of the use tax operation may bankrupt some owners, create a reflex reaction in the next year, and cause yet a higher rent level.

148. Several jurisdictions already vary property tax rates with respect to land use. *E.g.*, ARIZ. REV. STAT. § 42-136 (Supp. 1977). Prince George's County, Maryland, proposed a "tier tax" within the property tax system. It would have increased apartment property taxes by \$.94 per \$100 of assessed valuation, owner-occupied homes by \$.15 per \$100, and commercial and industrial properties by \$.22 per \$100. Washington Post, Jan. 15, 1977, § B, at 1, col. 7. It was defeated in the Maryland legislature, Washington Post, Feb. 25, 1977 § C, at 1, col. 6, apparently partly because of concern over its regressive effects on tenants. See Washington Post, Jan. 15, 1977, § B, at 3, col. 2.

communities on an urban fringe could encourage owners to maintain open space uses by assigning them a low tax rate.¹⁴⁹ Similarly, by assigning a higher tax rate to highrise buildings than to garden apartments, communities could encourage the development of garden apartments.

It is unclear how large a use tax differential must be to cause residents to change uses within the community or to migrate to another community. The landlord-tenant commission in Prince George's County announced that tenants already residing there did not "vote with their feet" in response to the extra four percent excise levied on their uses.¹⁵⁰ On the other hand, with a highly visible tax rate variation, in contrast to the irregular property tax rates and the ad hoc renters' tax, a land user who has an opportunity to compare use tax differentials before he chooses a community in which to settle is likely to see the tax as one factor influencing his decision.¹⁵¹

Locational incentives created by one community influence neighboring communities. For example, when one community that lies in the path of inevitable urban growth creates tax incentives for owners of undeveloped land to maintain their use of the land, the burgeoning population is forced to find residence elsewhere.¹⁵² Therefore, communities should use a regional planning approach in establishing differential use tax rates. In this way, a community seeking to attract industry in order to secure jobs for residents and extra tax revenue could tax industry at a lower rate, while a neighboring community that wishes to limit growth, and that already supports several commercial and industrial uses, could raise its industrial use tax rate.

B. Potential Problems Confronting the Use Tax

The proposed use tax system offers such a fundamental change from the ad valorem property tax that it may be difficult to evaluate its usefulness without first examining problems that may arise. In addition to the

149. This measure resembles the special property tax assessments now given open space uses. See note 20 *supra*.

Altering the tax rate, which is apparent, rather than the cost base, which is made less visible through the application of adjustments, would offer a greater incentive to taxpayers to make land use decisions at least partly on the basis of the tax burden. See Currier, *supra* note 15, at 44-62; Zimmerman, *supra* note 20, at 651-55.

150. Washington Post, Jan. 20, 1977, Md. Metro, at 3, col. 1.

151. See note 118 *supra*.

152. Courts have recognized this problem in their discussions of exclusionary zoning. See notes 215-45 & accompanying text *infra*.

general policy debate between cost allocation and perfect progressivity,¹⁵³ the use tax raises four specific questions.

1. Is the use tax a property or an excise tax?

The proposed land use tax would substitute for the property tax a system that makes no reference to fair market value of the property. Rather, the amount of tax would be based upon the nature of the use, its per capita service costs, and individual income. Where it does refer to real property by making the single-family acreage adjustment, the amount of tax again has no basis in the actual value of the land. Additionally, the municipality may choose to vary the tax rate. Because of constitutional requirements that direct property taxes be ad valorem and uniform,¹⁵⁴ taxing authorities must be certain that the use tax qualifies as an indirect excise and is therefore constitutional.

The key to distinguishing between excise and property taxes¹⁵⁵ is to determine whether the object of taxation is the real property itself or is merely an incident of property ownership. Since "[t]o levy a tax by reason of ownership of property is to tax the property,"¹⁵⁶ but to levy a tax on an incident of ownership is to tax a privilege, incident of ownership and ownership itself must be carefully distinguished. The object of the tax may be one aspect of ownership, but if that aspect is a right so closely connected with the property as to become an essential part of the property, the tax is on ownership itself and not upon a mere incident of ownership.¹⁵⁷ It will be deemed a property tax.

The Supreme Court¹⁵⁸ used this analysis in *Bromley v. McCaughn*¹⁵⁹ to uphold the federal estate and gift tax as an indirect, and therefore constitutional, tax. The Court characterized the subject of the tax, the act of transferring property to another person, as an active use of property

153. See notes 56-57 & accompanying text *supra*.

154. See notes 18-22 & accompanying text *supra*.

155. "The use tax is not a tax on property but is . . . in the nature of an excise tax upon the privilege of using, storing or consuming property." *Sullivan v. United States*, 395 U.S. 169, 177 n.28 (1969) (Soldiers & Sailors Civil Relief Act not intended to exempt servicemen from state use taxes or sales taxes).

156. *Dawson v. Kentucky Distilleries & Warehouse Co.*, 255 U.S. 288, 294 (1921).

157. "A tax upon a use so closely connected with delivery as to be *in substance a part thereof* might be subject to the same objections that would be applicable to a tax upon the sale itself." *Henneford v. Silas Mason Co.*, 300 U.S. 577, 583 (1937) (emphasis added).

158. Federal courts' distinctions between direct and indirect taxes are instructive because the Federal Constitution requires that direct taxes be apportioned, a concept requiring analogous distinctions to state constitutional requirements of uniformity for direct taxes. U.S. CONST. art. I, § 8, cl. 1. Taxes on property itself are direct; those on use are indirect.

159. 280 U.S. 124 (1929).

and therefore merely an incident of ownership.¹⁶⁰ In contrast, in *Dawson v. Kentucky Distilleries & Warehouse Co.*¹⁶¹ the Supreme Court held a warehousing tax on whiskey to be a direct tax on property, because

the thing really taxed is the act of the owner in taking his property out of storage into his own possession . . . for the purpose of making some one of the only uses of which it is capable The whole value of the whiskey depends upon the owner's right to get it from [storage], and to tax the right is to tax the value.¹⁶²

State courts have adopted this reasoning to find an excise tax in cases in which the tax appears to fall on the real property. In *Ampco Printing Advertisers' Offset Corp. v. City of New York*,¹⁶³ plaintiff-tenants challenged a commercial use tax levied against owners or occupants of any

160. The estate tax is in a class of taxes that, "since they apply only to a limited exercise of property rights, have been deemed to be indirect and so valid although not apportioned." *Id.* at 138.

In *Billings v. United States*, the Court described the requisite exercise of property rights as active rather than passive. 232 U.S. 261 (1914). The United States had taxed the use of foreign-built pleasure boats owned or chartered by any United States citizen. Each taxpayer had the option to pay an annual tax measured by the weight of the boat, or to pay a 35% ad valorem tax. Plaintiffs challenged the measure as a direct tax subject to the uniformity requirement. The Court held that since the object of the foreign boat tax was actual use, the statute was a tax on an incident of ownership, and was constitutional even though not apportioned.

Conceding that the right of ownership included the right to use, the Court nevertheless carefully distinguished the two rights.

[The] privilege of use is purely passive (or subjective), a right which necessarily pertains to ownership and must exist where there is ownership, as one may not obtain ownership without acquiring the privilege of use which ownership gives. The . . . use in the statutory sense, although it arises from ownership, is active (objective); that is, it is the outward and distinct exercise of a right which ownership confers, but which would not necessarily be exerted by the mere fact of ownership.

232 U.S. at 281. In the companion case, *Pierce v. United States*, 232 U.S. 290 (1914), the Court held that the United States could not constitutionally tax a yacht left in dry dock for the entire year. *Cf. Henneford v. Silas Mason Co.*, 300 U.S. 577, 582 (1937) (state compensating use tax on commodities purchased out of state)(state may tax bundle of privileges that makes up ownership collectively, or "separate the faggots and lay the charge distributively"); *Nashville, Chattanooga, & St. L. Ry. v. Wallace*, 288 U.S. 249 (1933) (power to tax property or sum of all powers incident to ownership includes power to tax each constituent incident) (citing *Bromley*).

161. 255 U.S. 288, 294 (1921).

162. *Id.* at 294. The state construed the tax as a license, or excise tax. The Court found this to be impossible for several reasons. The whiskey tax could not be considered an occupation tax on the warehouseman for the business of storage, because if the whiskey were sold or destroyed before its removal, no tax would be collected. In addition, only the warehouseman storing the whiskey at the time the owner removed it paid the tax. It could not be a tax on the business of removal because it taxed transfers or removals of single lots by holders of negotiable receipts, although the holders did not conduct a business. *Id.* at 290. Matthews believed this to be a make weight argument. Matthews, *supra* note 21, at 401.

163. 14 N.Y.2d 11, 197 N.E.2d 285 (1964), 247 N.Y.S.2d 865 (affirming *Robert B. Blaikie & Co. v. City of New York*, 41 Misc. 2d 371, 245 N.Y.S.2d 121 (Spec. Term 1963)).

premises used for the business of renting to others.¹⁶⁴ The tenants argued that because ownership includes the right to use and lease real property, "a tax on the use of real estate is a tax on the real estate itself."¹⁶⁵ Citing *Bromley* the court upheld the tax as an excise,¹⁶⁶ as the object of the tax was the privilege of using property for profit, clearly not a right that passively accompanies the possessory interest itself.¹⁶⁷ Courts also have upheld use taxes on hotels as constitutional excises, whether the taxes were collected from tenants for the privilege of occupying a room, or from hotelkeepers for the privilege of doing business.¹⁶⁸

A different permutation of the excise/property tax issue arises if a tax is excise in nature, but is measured in part by reference to the amount of property held.¹⁶⁹ For example, the Philadelphia school district levied an ordinary business privilege tax,¹⁷⁰ but measured it by the assessed fair

164. The city taxed:

[a]ny premises in the city occupied, used, or intended to be occupied or used for the purpose of carrying on or exercising any trade, business, profession, vocation or commercial activity, including any premises so used even though it is used solely for the purpose of renting, or granting the rights to occupy or use, the same premises in whole or in part to tenants.

N.Y. CITY AD. CODE, § L46-1.0 (Williams Supp. 1970), *reprinted in* [1969] 4 N.Y. TAX REP. (CCH) § 192-805 (1963). The ordinance evidently covers both leases and subleases; thus it is truly a business privilege tax. It exempted any holder renting out at least 75% of the usable floor space for residential use. N.Y. CITY AD. CODE § L46-4.0(d) (Williams Supp. 1970), *reprinted in* [1969] 4 N.Y. TAX REP. (CCH) § 192-836c (1963). Hotels were not entitled to the exemption. *Id.*

165. 14 N.Y.2d at 21, 197 N.E.2d at 288, 247 N.Y.S.2d at 869.

166. *Id.* See also *J.C. Penney Co. v. Lewisohn*, 40 App. Div. 2d 67, 337 N.Y.S.2d 472 (1972), *aff'd*, 33 N.Y.2d 528, 301 N.E.2d 421, 347 N.Y.S.2d 433 (1973) (without opinion) (company's renting 19 apartments for out-of-town employees while they attended conference not taxable because apartments not intended to be used for commercial purposes).

167. See notes 160-62 & accompanying text *supra* for the active/passive test of incidents of ownership. *Dawson v. Kentucky Distilleries & Warehouse Co.*, 255 U.S. 288 (1921).

168. *E.g.*, FLA. STAT. ANN. § 212.03 (1960), *as amended by* 1971 Fla. Laws ch. 986, §1. The original statute was held to be a constitutional excise in *Gaulden v. Kirk*, 47 So. 2d 567 (Fla. 1950) (taxes privilege of engaging in business; because tax is measured by compensation received, it is excise, whether classified as privilege tax or occupation tax). *Cf.* N.Y. CITY AD. CODE, §§ vv46-1.0 to -19.0, *reprinted in* [1969] 4 N.Y. TAX REP. (CCH) ¶¶ 193-631 to -692 (1970) (five percent of the consideration for use or occupancy of a hotel room; exemptions for permanent residents and occupants for more than 90 days).

169. The acreage adjustment in the proposed use tax may present such an issue. See *United States v. Detroit*, 355 U.S. 466 (1958) (although lessee of tax-exempt land used for profit was taxed *ad valorem*, held tax was an excise on privilege of using property for business). *Ampco Printing* also presented this issue, because under the statute the tax was measured according to the percentage of rent paid. The procedure is analogous to computing fair market value by capitalizing income.

170. PHILADELPHIA, PA., CODE § 19-1800, *as amended by* Bill No. 1860 (June 30, 1970), *partially reprinted in* *John Wanamaker, Philadelphia v. School Dist.*, 441 Pa. 567, 569-71 n.2, 274 A.2d 524, 525 n.2 (1971).

market value of the floor space devoted to commercial use.¹⁷¹ Despite the ad valorem aspect of the tax, the state court in *John Wanamaker, Philadelphia v. School District*¹⁷² upheld the tax as an excise on the ground that active commercial use is a mere incident of ownership.¹⁷³ The court in *Wanamaker* distinguished commercial use from ownership in a second way. Acknowledging that property was assessed in part with reference to "factors which included the intrinsic element of use,"¹⁷⁴ it nevertheless asserted that the use considered in the appraisal was only passive. Therefore, it held, any further active use could be taxed separately.

The Prince George's County renters' tax had aspects of both an excise and a property tax. Although the renters' tax was levied on the privilege of use and occupancy and was not measured by a direct assessment of property value, it carried distinct property tax overtones. The county taxed the only use for which the apartments were suitable—use as a residence. Under *Dawson*,¹⁷⁵ this use is not a mere incident of ownership, but is the very ownership of a residential leasehold. In addition, the court's discussion in *Wanamaker* of whether the use had been included in a prior assessment of property value for tax purposes would indicate that the renters' tax was not a fair excise, because apartments already had been assessed for their value as leased residential property.¹⁷⁶ In *Weaver v. Prince George's County*,¹⁷⁷ however, the court held that the renters'

171. Philadelphia's valuation formula was:

$$\frac{\text{square feet occupied or used}}{\text{total sq. ft. available for use on real estate}} \times \text{assessed value} \times \text{rate of taxation} = \frac{\text{days of actual use or occupancy}}{360}$$

Id.

172. 441 Pa. 567, 274 A.2d 524 (1971).

173. 441 Pa. at 574, 274 A.2d, at 527 (1971) (quoting *Billings v. United States*, 232 U.S. 261, 281 (1914)). The trial court disagreed on both the measurement and the object of the tax, holding that a tax on the use of one's own real estate was in reality a tax on the real estate itself. "If someone owns real estate he has a right to occupy it. To denominate his right a privilege is to transform it by diminishing it." See 441 Pa. at 576 n.4, 274 A.2d at 528 n.4 (quoting *Spaeth, J.*, trial court).

The two judges dissenting on appeal echoed the reasoning in *Dawson*: "[A] tax levied on the only use to which property can be put is a tax levied by reasons of ownership, and therefore a tax on the property." 441 Pa. at 587-88, 274 A.2d at 534 (Roberts, J., dissenting) (emphasis omitted) (citing *Matthews*, *supra* note 21).

174. 441 Pa. at 575, 274 A.2d at 527.

175. See notes 161-62 & accompanying text *supra*.

176. See discussion of appraising apartments by capitalization of income, notes 33-37 & accompanying text *supra*.

177. 281 Md. 349, 379 A.2d 399 (1977).

tax was an excise, "since the tax [fell] on only one of the manifold attributes associated with ownership of a leasehold interest in property."¹⁷⁸

The proposed use tax would present an easier case than did the renters' tax, and it most certainly would be characterized as an excise. It would classify all property according to active use. In addition, since the use tax would completely replace the property tax, it would not succumb to the court's reasoning in *Wanamaker* that the property supported no use above and beyond that already considered in appraising its value. Nominally, the use tax would be levied upon the privilege of choosing to employ property for various residential uses. Even the amount of tax would be established by the cost to the community of the owners' exercise of their privilege to choose a particular land use.

Finally, communities adopting the proposed use tax system for all types of property would have to employ careful draftsmanship to ensure that courts will characterize the tax as an excise. For example, phrasing the object of the tax as "the use of real property for a particular purpose" makes clear that it is a privilege tax.¹⁷⁹

2. Is the use tax payment deductible under I.R.C. § 164?

In all probability, neither homeowners nor tenants would be permitted to deduct the land use tax under I.R.C. § 164.¹⁸⁰ The tax does not qualify as a personal property tax because it is not assessed ad val-

178. *Id.* at 359, 379 A.2d at 404. The court enumerated three factors that distinguished property and excise taxes: their designation, their subject matter, and their incidents. *Id.* at 356, 379 A.2d at 403. Following the *Bromley* line of cases, the court emphasized the privilege aspect of the objects of typical excises.

Plaintiffs strenuously argued that both *Dawson* and a similar Maryland case that held a license tax on mobile homes to be an unconstitutional property tax because "occupying a home is not a privilege" should be controlling. See *Anne Arundel County v. English*, 182 Md. 514, 528, 35 A.2d 135, 142 (1943). The court in *English* held specifically that "[t]he tax in the instant case, being one upon the only uses of which the trailer is capable, namely as a place of habitation, is therefore a property tax." *Id.* at 530, 35 A.2d at 143. The court in *Weaver* expressly overruled *English* and distinguished *Dawson* as a case of double taxation. 281 Md. at 363-64, 379 A.2d at 407. It also cited *Wanamaker* and *Ampco* as controlling cases. *Id.* at 359-60, 379 A.2d at 404-05.

179. Matthews notes that "[legislatures] seem to realize that the privilege theory is the safest basis for sustaining a tax as clearly non-property in nature." Matthews, *supra* note 21, at 420. It is the best way to avoid constitutional limits on taxing power, *id.* at 390, and has been described as the perfect "social purpose tax" when operating in an arena with options available to the consumer. Zimmerman, *supra* note 20, at 673-74.

180. Owners of commercial and industrial uses may deduct taxes in any case under either I.R.C. § 162, as a cost of doing business, or I.R.C. § 212, as the cost of producing income. *E.g.*, *Willamette Valley Lumber Co. v. United States*, 252 F. Supp. 199 (D. Ore. 1960) (deductible as ordinary and necessary business expense although not earmarked as such).

orem.¹⁸¹ It is not a sales tax because no sale is involved,¹⁸² and since it is not complementary to a general sales tax, it cannot qualify as a compensating use tax.¹⁸³

The regulations define deductible real property taxes only as taxes "imposed on interests in real property and levied for the general public benefit" ¹⁸⁴ Taxes levied for local benefits are nondeductible,¹⁸⁵ except to the extent that taxpayers can show that revenue from special assessments is used for maintenance, repair, or interest charges.¹⁸⁶ The status of the proposed land use tax as a tax on real property is somewhat ambiguous. On one hand, the tax would not tax real property directly, and therefore it would seem to be nondeductible. On the other hand, because the tax is not restricted to property benefited by its revenue and does not tend to increase the value of property subject to it, taxpayers would not be prevented by the local benefit rule from deducting it. In fact, the tax is consistent with the policy of the statutory exception to the local benefit rule¹⁸⁷ because it seeks to meet municipal service costs.

The Internal Revenue Service ruled in one instance that charges imposed upon users of services, including police and fire protection, garbage, sewers, lighting, and recreational facilities, were deductible as "taxes" within the meaning of I.R.C. § 164(a).¹⁸⁸ In that situation, the tax was levied at a uniform rate upon the value of all buildings and all tangible personal property. Finding the charges deductible, the Service noted that the funds were commingled with general revenue, that there was no element of special privilege involved, and that the charges were imposed regardless of whether particular taxpayers used the services mentioned.¹⁸⁹ The Service, however, added:

Further, no variation is made in the rate of the charges to allow for properties subject to varying degrees of risk. Neither is there an adjustment in the rates although experience may have shown that particular kinds of construction, or certain areas, or activities demand a higher level of services than the average.¹⁹⁰

181. See I.R.C. § 164(b)(1); Treas. Reg. § 1.164-3(c)(1) (1957).

182. See I.R.C. § 164(b)(2)(A) Treas. Reg. § 1.164-(f) (1957). To be deductible, a sales tax must be imposed at one rate on a broad range of classes of items. *Id.*; cf. Treas. Reg. § 1.164-3(g) (1957) (special rules on general sales taxes).

183. See I.R.C. § 164(b)(D)(ii); Treas. Reg. §§ 1.164-3(h) to -3(i) (1957).

184. Treas. Reg. § 1.164-3(b)(1957).

185. I.R.C. § 164(c)(1); Treas. Reg. § 1.164-4(a) (1957).

186. I.R.C. § 164(c)(1); Treas. Reg. § 1.164-4(b)(1) (1957); Rev. Rul. 52, 1974-1 C.B. 50 (taxes imposed to finance building and repair of sewage system deductible).

187. I.R.C. § 164(c)(1); Treas. Reg. § 1.164-4(b)(1) (1957); Rev. Rul. 52, 1974-1 C.B. 50.

188. Rev. Rul. 61, 1961-2 C.B. 42.

189. *Id.* at 44.

190. *Id.*

Thus, the Service distinguished cases in which nondeductible water charges were based on numbers of tenants, hose connections, and bathrooms in each building taxed.¹⁹¹

Whether the same caveat would distinguish the land use tax is unclear. The use tax would adhere to significant averaging of service costs for each broad category of use, without making further adjustments for special privileges of which particular buildings or particular residents take advantage. The tax is still a general levy calculated in a nonuniform manner, however, and the Service may not wish to treat it as analogous to deductible service taxes.

Deductibility of the land use tax would adhere to the underlying policy of I.R.C. § 164. By totally replacing ad valorem property taxes, the tax would represent the major contribution made by local residents to the general tax receipt fund. Congress, when it enacted former I.R.C. § 164(f), recognized that this policy applies to charges similar to the proposed land use tax.¹⁹² Section 164(f) permitted residents who owned or leased property in atomic energy communities to deduct the amounts paid to the Atomic Energy Commission for "municipal-type services," which the regulations defined as "services usually rendered by a municipality and usually paid for by taxes."¹⁹³ The Senate committee reporting on the bill indicated that there was no reason why residents of atomic energy communities should not receive the same deductions that residents of other communities received, simply because they paid the Commission for services instead of paying the local government.¹⁹⁴

There is no reason why Congress, under the same rationale, should not allow deduction of the land use tax simply because it would be denominated a general tax on use rather than an ad valorem tax on property. Were the Service to disallow the deduction until Congress passed a special provision, the nondeductibility of the use tax would not be fatal to the proposed system, because that system, by treating homeowners and tenants alike, still alleviates a major problem of the property tax.

191. *Id.* The ruling distinguished *Benjamin Mahler v. Commissioner*, 119 F.2d 869, 873 (2d Cir.), *cert. denied*, 314 U.S. 660 (1941); and *O.D.* 719, 3 C.B. 139 (1920).

192. Technical Amendments Act of 1958, Pub. L. No. 85-866, § 6, 72 Stat. 1606 (repealed).

193. Treas. Reg. § 1.164-8 (1959). The regulation listed as examples police and fire protection, public recreation facilities, libraries, schools, public health and welfare, street maintenance, and sewage and refuse disposal when the latter was maintained out of general revenues. *Id.*

194. S. REP. NO. 1983, 85th Cong., 2d Sess. 16-17, *reprinted in* [1958] U.S. CODE CONG. & AD. NEWS 4791, 4805-06. Atomic energy communities eventually reverted to local government. Atomic Energy Commission Act of 1955, 42 U.S.C. § 2301 (1970). Congress therefore repealed I.R.C. § 164(f), noting that the provision had limited current application. Tax Reform Act of 1976, Pub. L. No. 94-455, § 1951(b)(3), 90 Stat. 1837.

3. *May a municipality employ taxes in part as a land use planning tool?*

A government's taxing power is extremely broad. The Supreme Court has recognized that every tax has some incidental regulatory effect, and that as long as it in fact collects revenue, it is still a tax.¹⁹⁵ Thus, excises on the sale of firearms¹⁹⁶ and on the business of accepting wagers¹⁹⁷ are within the proper scope of the taxing power, even though their effect may be to penalize the transactions they tax.¹⁹⁸

In *Great Atlantic & Pacific Tea Co. v. Grosjean*,¹⁹⁹ the Supreme Court upheld a Louisiana statute that taxed the operations of chain stores doing business in the state. The rate of tax, which was progressive, depended on the number of stores in the chain, regardless of whether the stores were located in Louisiana. The Court rejected plaintiffs' contention that Louisiana had denied equal protection of the law to chains with out-of-state stores and held that Louisiana could use its taxing power to aid small local chains that competed with large out-of-state chains. The Court said:

In the exercise of its police power the state may forbid, as inimical to the public welfare, the prosecution of a particular type of business, or regulate a business in such a manner as to abate evils deemed to arise from its pursuit. Whatever a state may forbid or regulate it may permit upon condition that a fee be paid in return for the privilege, and such a fee may be exacted to discourage the prosecution of a business or to adjust competitive or economic inequalities. *Taxation may be made the implement of the exercise of the state's police power*; and proper and reasonable discrimination between classes to promote fair competitive conditions and to equalize economic advantages is therefore lawful.²⁰⁰

Under *Grosjean*, if the state or its subdivisions may regulate land use directly through exercise of the police power, they also may do so indirectly through the taxing power, using economic incentives such as the proposed land use tax.

195. *E.g.*, *United States v. Kahriger*, 345 U.S. 22, 28 (1953).

196. *Sonzinsky v. United States*, 300 U.S. 506 (1937) (citing commercial tax cases) (every tax is regulatory to some extent, but not any less a tax).

197. *United States v. Kahriger*, 345 U.S. 22 (1953) (tax, though it had a regulatory effect, was valid because it in fact produced revenue).

198. *E.g.*, *Alaska Fish Salting & By-Products Co. v. Smith*, 255 U.S. 44 (1926) (licensing tax discouraging nonfood processing of fish); *McCray v. United States*, 195 U.S. 27 (1904) (federal tax on artificially colored margarine).

199. 301 U.S. 412 (1937).

200. *Id.* at 425-26 (emphasis added, footnotes omitted).

4. May a community employ the proposed use tax to accomplish exclusionary zoning?

Communities may not constitutionally engage in exclusionary zoning through the exercise of their police power,²⁰¹ but the taxing power may provide an attractive, legal alternative. Unlike the property tax, the proposed land use tax need not be uniform. Therefore, communities wishing to discourage "undesirable" residents from entering the community,²⁰² might consider turning to a land use tax to accomplish exclusionary zoning.²⁰³

Under current law, were the use tax employed for exclusionary purposes, it probably would withstand judicial scrutiny. In reviewing the purpose of a tax, the Supreme Court has granted great deference to legislatures. The plaintiff in *A. Magnano Co. v. Hamilton*²⁰⁴ argued that a fifteen-cent per pound state excise on butter substitutes sold within the state was levied for the purpose of discriminating against margarine manufacturers and in favor of the butter industry. The Court found that the statute was enacted to pursue a valid taxing goal. "From the beginning of our government, the courts have sustained taxes although imposed with the collateral intent of effecting ulterior ends which, considered apart, were beyond the constitutional power of the lawmaker to realize by legislation directly addressed to their accomplishment."²⁰⁵

The Court is reticent even to probe behind the face of the legislation in search of a collateral intent.²⁰⁶ In *Magnano*, the Court looked only at

201. See notes 97-114 & accompanying text *supra*.

202. Under the proposed use tax system, since each use category would "pay its own way," see notes 126-34 & accompanying text *supra*, communities would have little need to exclude certain uses in order to preserve the tax base. An impetus for exclusionary zoning would still exist, however, based upon biases against certain social, racial, and economic populations, as well as ill-founded prejudices against certain types of residential uses. See NEW JERSEY COUNTY AND MUNICIPAL GOVERNMENT STUDY COMM'N. *supra* note 89, at 14 (23.3% of respondents thought apartments were undesirable because they looked unattractive or are too dense, 20% thought residents were transients, 9.2% thought residents were criminal or on welfare, 20.8% thought the apartments were fiscally damaging). See also notes 96, 101 & accompanying text *supra*.

203. Varying the tax rate would be the most explicit way to discourage such uses. A jurisdiction could also try to manipulate the effective tax rates through various abuses of administrative discretion. For example, raising certain use cost estimates above their normal levels, or altering the number of persons per use or pupils per use would raise the tax base so that the income adjustment would have a less ameliorative effect. Alternatively, taking too low a percentage of income for a given tax base level would weaken the redistributive power of the income adjustment.

204. 292 U.S. 40 (1934).

205. *Id.* at 47.

206. *E.g.*, *Henneford v. Silas Mason Co.*, 300 U.S. 577 (1937) (motives alone will seldom invalidate tax if tax is proper apart from motives); *Sonzinsky v. United States*, 300 U.S. 506 (1937) (courts will not delve into hidden motives of Congress); *United States v. Doremus*, 249 U.S. 86 (1918) (tax not invalid merely because supposed motives other than revenue raising can be attributed

the face of the statute because, basically, it failed to find a reason to doubt it.²⁰⁷ In the *Child Labor Tax Case*,²⁰⁸ the Court struck down a state statute that taxed employers of children under sixteen. The Court invalidated the statute only because it found proof on the face of the statute that the tax actually was intended to destroy its object.²⁰⁹

The judicial doctrine of deference gives rise to considerable potential for abuse of the proposed use tax system. If taxing jurisdictions were to create reasonable differentials between uses in either the actual tax rate or the effective tax liability, the effect of the tax would be subtle and the tax would support land use planning goals. If, on the other hand, communities were to create extreme differentials that in purpose or in effect prohibited tenants from entering the community, or that taxed less wealthy classes of residents at extremely disproportionate rates,²¹⁰ the tax *qua* tax might survive constitutional challenge if the legislature merely alleged on its face a legitimate taxing goal.

C. A Model for Judicial Review of Land Use Taxes

To permit communities to exclude certain uses by employing the land use tax would defeat one of the objectives of the proposed taxing system:

to its passage); *Veazie Bank v. Fenno*, 75 U.S. (8 Wall.) 535 (1867) (judiciary cannot prescribe limitations on the legislature's valid exercise of the taxing power).

207. 292 U.S. at 44-45 (1934). The opinion acknowledged that a tax might deny due process if "its necessary interpretation and effect be such as plainly to demonstrate that the form of taxation was adopted as a mere disguise, under which there was exercised, in reality, another and different power denied by the Federal Constitution to the state." *Id.* at 44-45. It refused to find such a disguise here, however, but held that a plain taxing statute "must be construed, and the intent and meaning of the legislature ascertained, from the language of the act." *Id.* at 46.

208. *Bailey v. Drexel Furniture Co.*, 259 U.S. 20 (1922).

209. 259 U.S. at 37-38. Once it found an invalid purpose, the Court struck down the statute under comity principles as an encroachment by the federal government on state power to regulate labor.

210. Apparently, either exclusionary purpose or effect may disqualify such an ordinance under exclusionary zoning law. One court noted: "While . . . Mount Laurel's actions were deliberate, we are of the view that the identical conclusion follows even when municipal conduct is not shown to be intentional, but the effect is substantially the same as if it were." *Southern Burlington County NAACP v. Township of Mount Laurel*, 67 N.J. 151, 174 n.10, 336 A.2d 713, 725 n.10 (1975).

The Supreme Court's decision in *Village of Arlington Heights v. Metropolitan Hous. Dev. Corp.*, 429 U.S. 252, 265 (1977) indicated that in the future it will demand proof of discriminatory purpose before it will remedy alleged discriminatory impacts in exclusionary zoning cases. It is not yet clear whether states will follow this conservative trend in their zoning cases. *But cf.* *Oakwood at Madison, Inc. v. Township of Madison*, 72 N.J. 481, 495 n.3, 371 A.2d 1192, 1198 n.3 (1977) ("[s]ince *Mount Laurel* is based on State constitutional grounds, its requirements are not affected by the less restrictive federal concept of equal protection in this area") (citing *Arlington Heights*). In any event, the facts of *Arlington Heights* are distinguishable, because plaintiffs there challenged a vote which denied their application for a variance from the comprehensive zoning plan. *Mount Laurel* and other state exclusionary zoning cases deal with the zoning plan itself, rather than with procedures to secure variances.

to regulate regional land use in a positive fashion while guaranteeing the revenue needed to support new uses. Given its susceptibility to such misuse, the use tax should be examined with greater judicial scrutiny than are most taxes.

In *McCray v. United States*,²¹¹ although it declined to question the purpose of a taxing statute as long as the tax was within a lawful power,²¹² the Court nevertheless conceded that

[w]here it was plain to the judicial mind that the [taxing] power had been called into play not for revenue but solely for the purpose of destroying rights which could not be rightfully destroyed consistently with the principles of freedom and justice upon which the Constitution rests, [then] it would be the duty of the courts to say that such an arbitrary act was not merely an abuse of delegated power, but was the exercise of an authority not conferred.²¹³

When courts see that communities have employed the land use tax to harm the same persons whose rights exclusionary zoning laws protect, their review should follow the dictum in *McCray*.

Courts should systematically review land use tax cases by combining traditional tax analysis with the newer exclusionary zoning analysis.²¹⁴ In such a review, courts would not read purpose automatically from the face of the statute, but would determine purpose in light of regional needs, the history of the tax legislation, or the tax's effect on land use. If a court found exclusionary motives, its analysis would shift from a deferential review of taxation to a more active inquiry into the nature of the land use exclusion in light of community and regional needs.

1. Current judicial analysis in exclusionary zoning cases

When plaintiffs²¹⁵ challenge zoning measures, courts usually will evaluate the ordinances under the traditional test of validity: whether the

211. 195 U.S. 27 (1904) (federal tax on margarine did not encroach on a state's police power to regulate).

212. *Id.* at 56.

213. *Id.* at 64 (dictum).

214. Such a combination is reasonable because the use tax is designed to have an effect on land use as well as to tailor fiscal capabilities to the patterns of land use. Even in tax cases, courts have indicated they would not permit communities to do indirectly what they cannot do directly, and thus a stricter standard of review is appropriate. *E.g.*, *City of Detroit v. Murray Corp. of America*, 355 U.S. 489, 492 (1958) ("we are concerned only with its practical operation, not its definition"); *Dawson v. Kentucky Distilleries & Warehouse Co.*, 255 U.S. 288 (1921); *Choctaw, Ok. & Gulf R.R. Co. v. Harrison*, 235 U.S. 292 (1914).

215. Traditionally, zoning plaintiffs have been landowners alleging that public restrictions on use constituted a taking of property. *E.g.*, *Euclid v. Ambler Realty Co.*, 272 U.S. 365 (1926); *County*

regulation is reasonable, not arbitrary, and whether it has a substantial relationship to police power purposes of protecting health, safety, and welfare.²¹⁶ Courts may, however, look to the purpose of the regulation and, finding an exclusionary purpose, may strike down the measure as contrary to the general welfare.²¹⁷

Ordinances might not express the purpose to exclude, but courts may infer such a purpose from the history of the ordinance²¹⁸ or from the kind of regulation imposed. For example, after discussing the community's need for sewers, roads, open space, historic sites, and rural character, the court in *National Land and Investment Co. v. Kohn*²¹⁹ found that at the heart of the large-lot zoning was the residents' desire for their homes not "to have to start keeping company with" smaller, less expensive, more crowded homes.²²⁰ The court struck down the zoning law, holding that while a private landholder may be able to surround himself

Comm'rs v. Miles, 246 Md. 355, 228 A.2d 450 (1967). In the exclusionary zoning cases, property owners within the community may have standing to raise claims of exclusion on behalf of outsiders. *Appeal of Kit-Mar Builders, Inc.*, 439 Pa. 466, 474 n.6, 268 A.2d 765, 768 n.6 (1970) (landowners' due process rights "cannot realistically be detached from the rights of other people desirous of moving into the area in search of a comfortable place to live") (quoting 21 STAN. L. REV. 767 (1969)). *Contra*, *Construction Indus. Ass'n v. City of Petaluma*, 522 F.2d 897 (9th Cir. 1975), *cert. denied*, 424 U.S. 934 (1976) (builders and landowners had no standing to bring outsiders' right to travel claim). Outsiders also may have standing to allege harm by exclusion. *See Oakwood at Madison, Inc. v. Township of Madison*, 75 N.J. 481, 371 A.2d 1192 (1977) (plaintiffs were two developers and six low-income outsiders).

216. *National Land & Inv. Co. v. Kohn*, 419 Pa. 504, 215 A.2d 597 (1965). *Accord*, *Board of County Supervisors v. Carper*, 200 Va. 653, 660, 107 S.E.2d 390, 395 (1959) ("clearly arbitrary and capricious"; "no reasonable or substantial relation to general welfare"; if "fairly debatable," must be sustained); *Steel Hill Dev., Inc. v. Town of Sanbornton*, 469 F.2d 956 (1st Cir. 1972) (court not de novo actor or super-zoning review board).

217. *National Land & Inv. Co. v. Kohn*, 419 Pa. 504, 215 A.2d 597 (1965). The Court said: "A zoning ordinance whose primary purpose is to prevent the entrance of newcomers in order to avoid future burdens, economic and otherwise, upon the administration of public services and facilities cannot be held valid." *Id.* at 532, 215 A.2d at 612.

218. One aspect of an ordinance's history which has influenced courts is whether the restriction was promulgated after it became clear that the prohibited development was occurring. *Cf.* *National Land & Inv. Co. v. Kohn*, 419 Pa. 504, 215 A.2d 597 (1965) (minimum lot size increased after application for subdivision filed); *Steel Hill Dev., Inc. v. Town of Sanbornton*, 469 F.2d 956 (1st Cir. 1972) (petition to revoke permit approved). A court also may consider whether, under the ordinance, industry and middle- and upper-class residents were encouraged to enter the community, leaving a conspicuous absence of low-income residents. *Southern Burlington County NAACP v. Township of Mount Laurel*, 67 N.J. 151, 336 A.2d 713 (1975).

219. 419 Pa. 504, 215 A.2d 597 (1965).

220. *Id.* at 532, 215 A.2d at 612. *Accord*, *Appeal of Kit-Mar Builders, Inc.*, 439 Pa. 466, 474, 268 A.2d 765, 768 (1970) ("[w]e . . . refuse to allow the township to . . . keep out people, rather than make improvements"); *Board of County Supervisors v. Carper*, 200 Va. 653, 660, 107 S.E.2d 390, 395 (1959) (court found that "real purpose . . . was to prevent development of the western two-thirds of the county," channeling residents to east where government services were more economical).

with a large acreage, the general welfare was not fostered by a public ordinance "designed to be exclusive and exclusionary."²²¹

Not all exclusionary purposes are invalid. Before holding that an exclusionary purpose is fatal to a statute, courts will balance the effect of the exclusionary provision against the general welfare.²²² As a threshold issue, courts must define an appropriate standard of general welfare. This usually involves a regional approach, in which the court evaluates present needs within the community in light of the nature of surrounding communities.²²³ In *Southern Burlington County NAACP v. Township of Mount Laurel*,²²⁴ the Supreme Court of New Jersey stated the test that triggered regional considerations: "[w]hen regulation does have a substantial external impact, the welfare of the state's citizens beyond the borders of the particular municipality cannot be disregarded and must be recognized and served."²²⁵ The same court provided further guidance for determining the boundaries of the region that must be considered in *Oakwood at Madison, Inc. v. Township of Madison*.²²⁶ Although courts

221. 419 Pa. at 522, 215 A.2d at 612.

222. Some courts phrase the general welfare standard in terms of private versus public benefit. E.g., *Board of County Supervisors v. Carper*, 200 Va. 653, 662, 107 S.E.2d 390, 396 (1959) (ordinance excluding low-income residents from two-thirds of county serves private interests, since it reserves other third for wealthier residents). The terminology does not answer the general welfare question, however, for the dividing line between public and private interests must still be determined in each situation.

We agree that if the primary purpose or effect of the ordinance is to benefit private interests, rather than the public welfare, the legislation cannot be held valid merely because some of its incidental effects may be for the general good. On the other hand, if the ordinance has a substantial relationship to the general welfare of the community in that it can fairly be taken as a reasonable effort to plan for the future within the framework of the County's economic and social life, it is not unconstitutional because under it some person may suffer loss and others be benefited. . . . [T]he decisions, as we read them, turn on the various economic, physical and sociological factors involved in the particular case.

County Comm'rs v. Miles, 246 Md. 355, 368-69, 228 A.2d 450, 457 (1967).

223.

If all communities engaged in economic discrimination to preserve property value and retain a good tax base, the poor would be forced to the center city, away from jobs, public services, and adequate housing. It may be doubted whether this is the best way to promote . . . any . . . aspect of the *general welfare*.

Williams & Wacks, supra note 68, at 839.

224. 67 N.J. 151, 336 A.2d 713 (1975).

225. *Id.* at 176, 336 A.2d at 726. Courts using "public versus private" language also consider regionalism important. See *Appeal of Kit-Mar Builders, Inc.*, 439 Pa. 466, 268 A.2d 765 (1970); *Board of County Supervisors v. Carper*, 200 Va. 653, 107 S.E.2d 390 (1959).

Steel Hill is consistent with *Mount Laurel*'s substantial impact test, for according to the court, the developer sought to create a new demand in a rural area. Therefore, the exclusion of the use before potential residents were attracted to the area would have had little impact on the surrounding towns. *Steel Hill Dev., Inc. v. Town of Sanbornton*, 469 F.2d 956 (1st Cir. 1972).

226. 72 N.J. 481, 371 A.2d 1192 (1977).

should not employ a formular approach, they should give weight to "the degree to which the expert gives consideration to the areas from which the lower income population of the municipality would *substantially* be drawn absent exclusionary zoning."²²⁷

Once the court finds a "bad" exclusionary purpose, the community may proffer interests that it justifiably seeks to protect. The court will measure each interest against the general welfare to determine its individual validity. In making this measurement, the court will consider the immediacy of community interests in light of present conditions, and will not allow the community to refuse to face inevitable growth by raising its fears about the future.²²⁸

The purpose in *National Land* was suspect because the court found that Easttown was in the path of an inevitable population migration from Philadelphia; land abutting one highway already was substantially developed with industrial and commercial activities. Therefore, the ordinance really sought to avoid burdens "which time and natural growth invariably bring."²²⁹ In *Steel Hill Development, Inc. v. Town of Sanbornton*²³⁰ a federal court distinguished *National Land* on the grounds that Easttown's population growth necessitated a broader concept of general welfare than would be appropriate for Sanbornton. Sanbornton was a small village of 1,000 residents near a resort lake;²³¹ therefore its efforts to halt a 510-acre residential development did not unnaturally limit a current and pressing need for suburban growth. Finding the village's concerns regarding population expansion to comport with an appropriate standard of general welfare,²³² the court upheld the large-lot zoning despite its opinion that "the basic motivation of the town meeting was . . . simply to keep outsiders, provided they wish to come in quantity, out of town."²³³

227. *Id.* at 539, 371 A.2d at 1221 (emphasis supplied). Relevant factors include proximity to jobs, shopping areas, and schools, and the historical sources of a community's population. *Id.* at 539-40, 371 A.2d at 1221.

228. *National Land & Inv. Co. v. Kohn*, 419 Pa. 504, 528, 215 A.2d 597, 609-10 (1965). *Accord*, Appeal of Comm. College, 435 Pa. 264, 269, 254 A.2d 641, 644 (1969) (a broad zoning decision cannot be made simply because of potential sewage problem in future); Appeal of Kit-Mar Builders, Inc., 439 Pa. 466, 268 A.2d 765, 768 (1970); *Steel Hill Dev., Inc. v. Town of Sanbornton*, 469 F.2d 956, 962 (1st Cir. 1972) (mere expectation of population growth not a legitimate purpose for zoning control).

229. 419 Pa. at 525-26, 215 A.2d at 609-10.

230. 469 F.2d 956 (1st Cir. 1972).

231. *Id.* at 958.

232. The concerns included ecology, scenic value, open space, rural character, and the burdens on fire and police services, roads, and water supply. *Id.* at 961. A low standard of general welfare was used because of the rural surroundings. The court emphasized that the developer sought to create a need, not to meet an existing one. *Id.*

233. *Id.* at 962.

The legal viability of a particular exclusionary zoning statute, therefore, will rest on purely factual considerations.²³⁴ In favor of the statute, the court will consider the total weight of those community interests that the court is convinced are valid, important, and require a zoning solution. Balanced against those interests are the costs to the general welfare, qualified in terms of the permanency²³⁵ and absoluteness²³⁶ of the harms.

One variation of exclusionary zoning, which courts have forbidden, is called fiscal zoning.²³⁷ In fiscal zoning, a community seeks to bolster its tax base by closing its doors to uses that are weak revenue sources and favoring good tax ratables like industrial and commercial uses and large-lot, single-family homes.²³⁸ These plans often are struck down,

234. In both *Madison* and *Mount Laurel*, for example, the courts undertook a detailed examination of the demographic characteristics of the region, and carefully weighed income characteristics of residents against the necessary cost of dwellings which would comply with the challenged zoning ordinance. *Oakwood at Madison, Inc. v. Township of Madison*, 72 N.J. 481, 500-15, 371 A.2d 1192, 1201-09 (1977); *Southern Burlington County NAACP v. Township of Mount Laurel*, 67 N.J. 151, 161-73, 183, 336 A.2d 713, 718-24, 729 (1975).

235. It is in this final balancing that "slow growth" measures may be upheld. See notes 106-09 & accompanying text *supra*, e.g., *Builders Ass'n v. Superior Court*, 13 Cal. 2d 225, 529 P.2d 582, 118 Cal. Rptr. 158 (1974) (two-year plan, exceptions available); *Construction Indus. Ass'n v. City of Petaluma*, 522 F.2d 897 (1975), *cert. denied*, 424 U.S. 934 (1976) (plan restricting number of apartments had inclusionary effect by replacing existing uses with units for low- and moderate-income families, and was valid, although court did not hold plan good for all time); *Golden v. Town of Ramapo*, 30 N.Y.2d 351, 285 N.E.2d 291, 334 N.Y.S.2d 138, *appeal dismissed*, 409 U.S. 1003 (1972) (plan temporary, and exemptions available).

236. There is some indication that "a zoning ordinance which totally excludes a particular business from an entire municipality must bear a more substantial relationship to the . . . general welfare than an ordinance which merely confines that business to a certain area in the municipality." *Exton Quarries, Inc. v. Zoning Bd. of Adjustment*, 425 Pa. 43, 60, 228 A.2d 169, 179 (1967) (excluding quarries from entire township).

237. "Fiscal zoning determines the optimum use of land by carefully weighing the contribution of a proposed use to the economic bases of the community, against the costs such usage will entail in terms of the demand on public services and facilities." *Limits in Fiscal Zoning*, *supra* note 101, at 457. Although it is invalid in its absolute form, in situations similar to those in *Ramapo*, fiscal zoning in the form of time-sequence controls, which correlate growth with a fiscally sound plan for extension of services may be used. *Id.*; see note 106 & accompanying text *supra*.

238. *Madison Township*, New Jersey, for example, sought to "catch its breath" after experiencing a period of rapid growth and skyrocketing property taxes. It adopted a zoning plan which included zones of one- and two-acre minimum single-family lots and permitted a total of no more than 500-700 additional multi-family units at a rate of 200 per year. The plan permitted no three-bedroom units and established a ceiling for two-bedroom uses at 20% of any development. *Oakwood at Madison, Inc. v. Township of Madison*, 117 N.J. Super. 11, 14, 17, 283 A.2d 353, 355, 356 (L. Div. 1971), *aff'd as modified*, 72 N.J. 481, 371 A.2d 1192 (1977).

While litigation was still in progress, the township amended its ordinance to break up large lots, to provide more multi-family housing, and to establish PUD and cluster zones. See *Oakwood at Madison, Inc. v. Township of Madison*, 72 N.J. 481, 503-10, 371 A.2d 1192, 1203-06 (1977). In *Oakwood*, the Supreme Court of New Jersey affirmed the holding that the zoning ordinance was invalid,

however, because they are contrary to the general welfare of the region.²³⁹ By attracting industry, the plans create a demand for adequate housing, but they directly exclude such housing, forcing low- and middle-income families to find homes in neighboring communities.²⁴⁰ The neighboring communities are left with demands for new schools and services, but with no industry to help offset the cost of such development.

In *Mount Laurel*,²⁴¹ the court rejected²⁴² the use of the zoning power to allow only land uses that benefit the local tax rate by "paying their

and reaffirmed its prior opinion in *Mount Laurel*. *Id.* See notes 241-44, 247 & accompanying text *infra*.

239. "The exclusionary approach . . . coincides in time with desperate housing needs in the city and region and expanding programs, federal and state, for subsidized housing for low income families." *Oakwood at Madison, Inc. v. Township of Madison*, 117 N.J. Super. 11, 20, 283 A.2d 353, 358. At the time of the opinion, Madison Township's population was 48,715, and 30% of its land was still vacant. *Id.* at 14, 283 A.2d at 355. The court in *Oakwood* even indicated that fiscal zoning "to avoid school construction and other governmental costs incident to population expansion" were per se irrelevant to zoning purposes. *Id.* at 18, 283 A.2d at 357. It expressly stated that the ordinance would be judged not as fiscal zoning, however, but under the reasonableness test in light of general welfare. *Id.*

240. The court in *Oakwood* found that restricting single family dwellings to one-acre lots, priced at \$45,000 to \$50,000, would effectively exclude all but families above the 90th percentile of national and county income; two-acre lots were even more exclusive. *Id.* at 16-17, 283 A.2d at 356.

241. 67 N.J. 151, 336 A.2d 713 (1975) (affirming 119 N.J. Super. 164, 290 A.2d 465 (L. Div. 1972)). The court pursued an analysis consistent with the model suggested in this comment. The court found the ordinance to be "presumptively contrary to the general welfare and outside the intended scope of the zoning power." *Id.* at 185, 336 A.2d at 730. "A facial showing of invalidity is thus established, shifting to the municipality the burden of establishing valid superseding reasons for its action and non-action." *Id.*

242. Since *Mount Laurel* did not convince the court that its interests were sufficiently important to outweigh the exclusionary effects, it remains unclear what burden of proof the town must meet in alleging important interests. A "superseding reason" presumably is not as difficult to prove as the "compelling state interest" used in protecting fundamental constitutional rights.

The court had established at the outset, however, that, while it theoretically could consider the reasonableness of zoning legislation with the same result under either state constitutional provisions or the zoning enabling act, it considered the basic importance of housing availability to be of constitutional dimension. *Id.* at 175, 336 A.2d at 725. *Cf.* *Appeal of Kit-Mar Builders, Inc.*, 439 Pa. 466, 268 A.2d 765, 769 (1970) (large-lot zoning with exclusionary purpose "completely unreasonable" absent "extraordinary justification"); *Limits in Fiscal Zoning*, *supra* note 101, at 479 (sliding scale burden of proof according to absoluteness of exclusion, citing *Exton*).

In contrast to these invalid assertions of community interest, the court held that the environmental interests were legitimate concerns of the general welfare to be furthered through zoning. The township, however, failed to carry its burden in proving the superseding nature of the interest. The test applied to environmental concerns was that "the danger and impact must be substantial and very real . . . and the regulation adopted must be only that reasonably necessary for public protection of a vital interest." 67 N.J. at 187, 336 A.2d at 731. The opinion suggests a "less onerous means" test similar to that used in first amendment law. *Accord*, *Appeal of Kit-Mar Builders, Inc.*, 439 Pa. 466, 268 A.2d 765 (1965) (sewage problem could be solved by percolation tests, sanitary regulations, or a public sewer system); *National Land & Inv. Co. v. Kohn*, 419 Pa. 504, 215 A.2d 597 (1965) (4-acre lots not necessary or reasonable way to deal with pollution; greenbelt open space better accomplished

own way.”²⁴³ Although cognizant of severe property tax burdens, the court advised municipalities to seek solutions through powers other than zoning.²⁴⁴

The land use tax offers an alternative solution. It maximizes cost allocation while still redistributing tax burdens according to income, thus permitting each use, whatever it may be, to pay its own way. The simple act of correlating fiscal considerations to the kinds of uses which are present in a community does not constitute fiscal zoning;²⁴⁵ thus, the use tax itself could not be condemned. Further, by tying tax burdens to the cost of land uses, the use tax does not encourage a community to exclude certain uses on the rationale that they do not contribute to the tax base of the community.

2. Zoning analysis applied to the land use tax

Some communities, however, might make prohibitive revenue demands on certain uses in order to keep them out. Alternatively, given a certain economic composition, some communities might find that the tax burdens on some uses, as determined under the straight cost allocation/income averaging method, are so prohibitive as to exclude those uses. In either case, using exclusionary zoning analysis, courts can provide relief even though they are not presented with a fiscal zoning situation.

In cases in which taxing jurisdictions raise cost bases or tax rates to a disparate level for a single use, courts might infer an exclusionary purpose and might strike down the tax. The town, of course, could attempt

by cluster zoning or eminent domain); *Oakwood at Madison, Inc. v. Township of Madison*, 117 N.J. Super. 11, 283 A.2d 353 (L. Div. 1971) (drainage problem not acceptable justification when not included in plan and alternatives not considered), *aff'd as modified*, 72 N.J. 481, 371 A.2d 1192 (1977). *But see* *Steel Hill Dev., Inc. v. Town of Sanbornton*, 469 F.2d 956, 962 (badly handled legislation because unclear why 6-acre restriction rather than 4- or 8-acres; nevertheless upheld because temporary).

243. 67 N.J. 151, 185, 336 A.2d 713, 731 (1975). The prohibition was on *excluding* poor tax ratables. A town may zone to *attract* industrial ratables which will offset the costs engendered by residential development. *Id.* Even then, however, “[t]he amount of land removed from residential use by allocation to industrial and commercial purposes must be reasonably related to the present and future potential for such uses.” *Id.* at 187, 336 A.2d at 732.

244. *Id.* at 186, 336 A.2d at 731.

245. In *Oakwood at Madison*, the court distinguished the impermissible technique of fiscal zoning from the situation in *Gruber v. Mayor of Raritan Township*, in which a tract of land was rezoned to prohibit residential development and to permit only light industry. *See* *Gruber v. Mayor of Raritan Township*, 39 N.J. 1, 186 A.2d 489 (1962). In *Gruber*, the court had held that alleviating the tax burden and relieving school congestion were permissible objectives of a zoning ordinance. *Id.* The court in *Oakwood* indicated that such a law “dealt with the pursuit of tax revenues through zoning for new industry, not the stabilization of the tax rate through zoning to exclude new low and moderate income housing.” *Oakwood at Madison, Inc. v. Township of Madison*, 117 N.J. Super. 11, 18, 283 A.2d 353, 357 (L. Div. 1971), *aff'd as modified*, 72 N.J. 481, 371 A.2d 1192 (1977).

to show a justifiable interest. Since the tax would regulate land use by creating incentives rather than by absolutely barring certain uses from any given parcel of land, courts may be less willing to infer exclusionary purpose than they would be in pure zoning cases. If the unfavored and heavily taxed use has a low-income population, however, courts should weigh that fact in the final balancing of interests.

In any case, where low-income uses cost the community more than high-income uses,²⁴⁶ plaintiffs might seek to prevent exclusionary zoning by applying the concept of affirmative duty developed in *Mount Laurel*.²⁴⁷ Should a court be convinced that the effective, albeit poten-

246. It is unclear whether this would occur. See Table 3 & notes 89-94 & accompanying text *supra*. This situation, in which costs for uses protected by zoning laws actually are higher than costs for unprotected uses, should be distinguished from the situation in which an assessor makes costs of unfavored uses only appear higher through abuse of his discretion. In the latter situation, courts may infer an exclusionary purpose.

247. The court said in *Mount Laurel*:

We conclude that every such municipality must, by its land use regulations, presumptively make realistically possible an appropriate variety and choice of housing. More specifically, presumptively it cannot foreclose the opportunity of the classes of people mentioned for low and moderate income housing and in its regulations must affirmatively afford that opportunity, at least to the extent of the municipality's fair share of the present and prospective regional need therefor. These obligations must be met unless the particular municipality can sustain the heavy burden of demonstrating peculiar circumstances which dictate that it should not be required so to do.

67 N.J. at 174, 336 A.2d at 724-25 (footnote omitted).

The court also noted that:

[i]t is plain beyond dispute that proper provision for adequate housing of all categories of people is certainly an absolute essential in promotion of the general welfare required in all local land use regulation. Further the universal and constant need for such housing is so important and of such broad public interest that the general welfare which developing municipalities like Mount Laurel must consider extends beyond their boundaries and cannot be parochially confined to the claimed good of the particular municipality. It has to follow that, broadly speaking, the presumptive obligation arises for each such municipality affirmatively to plan and provide, by its land use regulations, the reasonable opportunity for an appropriate variety and choice of housing, including, of course, low- and moderate-cost housing, to meet the needs, desires and resources of all categories of people who may desire to live within its boundaries. Negatively, it may not adopt regulations or policies which thwart or preclude that opportunity.

Id. at 179-80, 336 A.2d at 727-28.

In the sequel to *Mount Laurel*, the Supreme Court of New Jersey, grappling with the problems of construction costs in the present economy, indicated that the ruling in *Mount Laurel* was not intended to require communities themselves to seek aid to build low- and middle-income uses. The court said: "While we have described the sponsorship of public housing projects as a moral obligation of the municipality in certain specified circumstances, we have no lawful basis for imposing such action as obligatory." *Oakwood at Madison, Inc. v. Township of Madison*, 72 N.J. 481, 546, 371 A.2d 1192, 1224 (1977) (citing *Mount Laurel*). The court clearly adhered to the broad principle of *Mount Laurel*, however, that "the objective of a court . . . is to determine whether [the ordinance] realistically permits the opportunity to provide a fair and reasonable share of the region's need for housing for the lower income population." *Id.* at 525, 543, 371 A.2d at 1213, 1223. See also *Southern Alameda*

tially unintended, impact of the use tax is to exclude expensive low-income uses,²⁴⁸ it would be appropriate for the court to require a community to redistribute the tax burden away from low-income residents.²⁴⁹ Redistribution of the tax burden would be justified by reference to the general welfare of the region,²⁵⁰ and it would be measured to some degree by the relief needed to permit a community to absorb its fair share of low- and middle-income uses.²⁵¹

Communities could accomplish a redistribution of the tax burden by averaging income across all uses instead of within each category. In the model, the tax is adjusted for income by adding to the cost base ten percent of the difference obtained by subtracting average income for a particular use from the user's actual income. Averaging income across all uses would yield a higher average income for low-income uses, and a lower average income for high-income uses, than under the pure model. Thus, when actual incomes are compared to average incomes, for purposes of the income adjustment, the tax burden would be redistributed.

Spanish Speaking Org. v. City of Union Hill, 424 F.2d 291 (9th Cir. 1970) (municipal responsibility to initiate and to develop plan that accommodates needs of low- and moderate-income families).

A corollary to the affirmative duty concept is that the jurisdiction cannot channel low- and middle-income families to one region of the community simply because facilities and services already present there enable the government to save money. *Compare* Board of County Supervisors v. Carper, 200 Va. 653, 107 S.E.2d 390 (1959) (rezoning designed to channel low-income families to developed eastern third of county held invalid) *with* Construction Indus. Ass'n v. City of Petaluma, 522 F.2d 897 (1975), *cert. denied*, 424 U.S. 934 (1976) (permissible to induce uses to fill in center city to stop urban sprawl); *Confederacion de La Raza Unida v. City of Morgan Hill*, 324 F. Supp. 895 (N.D. Cal. 1971) (channeling effect permissible to accomplish preservation of hillside and orderly development); *and* *Gautreaux v. Chicago Hous. Auth.*, 265 F. Supp. 582 (N.D. Ill. 1967) (site selection for public housing conducted to segregate races held constitutional, *aff'd*, 436 F.2d 302 (7th Cir. 1970), *cert. denied*, 402 U.S. 922 (1971). *Contra*, *County Comm'rs v. Miles*, 246 Md. 355, 228 A.2d 450 (1967) (channeling population to area developed with services aids a good tax base while retaining low service requirements upheld).

248. Madison Township failed to give low-income uses the required opportunity to enter, although it substantially eased the nominal restrictions in its ordinance. Three "cost-generating requirements" of the ordinance effectively precluded construction of "least-cost" housing. The cost-generating factors were the floor area ratio, the need for new water and sewage facilities and roads, and the approval process for developers' applications. *Id.* at 514-24, 371 A.2d at 1208-13.

249. A court itself, might even fashion tax relief depending upon the community's inclination to cooperate. The court in *Oakwood* only compelled the township to grant the plaintiff builders a permit to build the desired uses. Justice Pashman, however, wrote a lively concurring opinion in which he urged the court to adopt a more active role in fashioning relief. In his view, if the community failed to develop an adequate plan in 90 days, the court should develop its own remedial plan. *Id.* at 555, 617, 371 A.2d at 1229, 1260.

250. The court in *Madison* struggled to formulate a definition of "region." *Id.* at 536-41, 371 A.2d at 1219-22. The proper region to consider is "the area from which, in view of available employment and transportation, the population of the township would be drawn, absent exclusionary zoning." *Id.* at 537, 371 A.2d at 1219 (quoting trial court).

251. The "fair share" concept denotes a community's obligation to absorb that portion of the region's low- and middle-income residential uses which will bring it into parity with the portion that

CONCLUSION

Tenants and homeowners receive such disparate treatment under the federal, state, and local tax systems that, without careful examination, it is difficult to know which group bears a heavier tax burden. Homeowners who watch their property taxes rise may blame the increase on presumably costly apartments for which tenants allegedly pay little or no tax. Fiscal considerations as well as other traditional biases may lead a community to exclude multi-family buildings through restrictive zoning. On the other hand, tenants indirectly bear at least as much of the property tax burden as do homeowners, and when the accumulated burden of all state, federal, and local taxes is considered, tenants pay a greater portion of their income in taxes than do homeowners.

Prince George's County, Maryland, chose to address allegedly uneven property tax burdens by levying against multi-family dwellings a tax for the privilege of using and occupying apartments as residences. The renters' tax not only heightened the tenant/homeowner tax inequities, but also presented an interjurisdictional tax differential, which could have operated to discourage tenants from living in the county. Assuming that Prince George's County intended merely to equalize tax burdens while not threatening its own fiscal health, the proposed use tax would better serve its needs. The use tax, which would entirely replace the property tax, would not be subject to ad valorem requirements because it is excise in nature. With this added flexibility, the tax could fulfill a county's desire to maximize both cost allocation and tax progressivity.

The use tax would tie tax levels to varying land uses; therefore, a taxing jurisdiction also might implement the use tax to support its long-range land use plan. Since the locational incentive of the tax would depend on interjurisdictional tax differentials as well as on inter-use differentials within one jurisdiction, the tax would be most effective if it were established in conjunction with neighboring jurisdictions. In a metropolitan area, cooperation among communities required to establish effective use tax rates would encourage compliance with the regional approach that courts have mandated for land use planning.

surrounding communities have absorbed. See D. LISTOKIN, *supra* note 96, at 116; Listokin, *Fair-Share Housing Distribution: Will It Open the Suburbs to Apartment Development?*, 2 REAL EST. L.J. 739 (1973). Fair share is the asymptote of exclusionary zoning analysis. As the court said in *Madison*, "[T]he prime question before us, in *Mount Laurel* terms, is whether the trial court has correctly found that Madison's zoning ordinance does not provide the opportunity to meet a fair share of the regional burden for low and moderate income housing needs." *Oakwood at Madison, Inc. v. Township of Madison*, 72 N.J. 481, 498, 371 A.2d 1192, 1200 (1977). In its opinion, the court fully developed the concept of fair share. See *id.* at 524-44, 371 A.2d at 1213-23.

Since the use tax would simultaneously address revenue raising and land use planning, when it is challenged it should be reviewed by courts under the judicial analysis developed for exclusionary zoning cases, rather than under the less strict review usually made of taxing measures. This heightened scrutiny, which would consider any exclusionary purpose behind disparate tax rates and would balance exclusion against legitimate community needs, would safeguard the rights of all residents who are taxed.

In reality, land use and tax burdens are inseparably intertwined, as is apparent from the court's discussion of "least-cost housing" in *Oakwood at Madison, Inc. v. Township of Madison*. By combining land use and tax considerations into one system, communities can tax equitably and flexibly, can use the effect of taxes on land use to their advantage by recognizing that effect, and can insure that their land use plan automatically will meet its own revenue demands while it readily admits multi-family uses.

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